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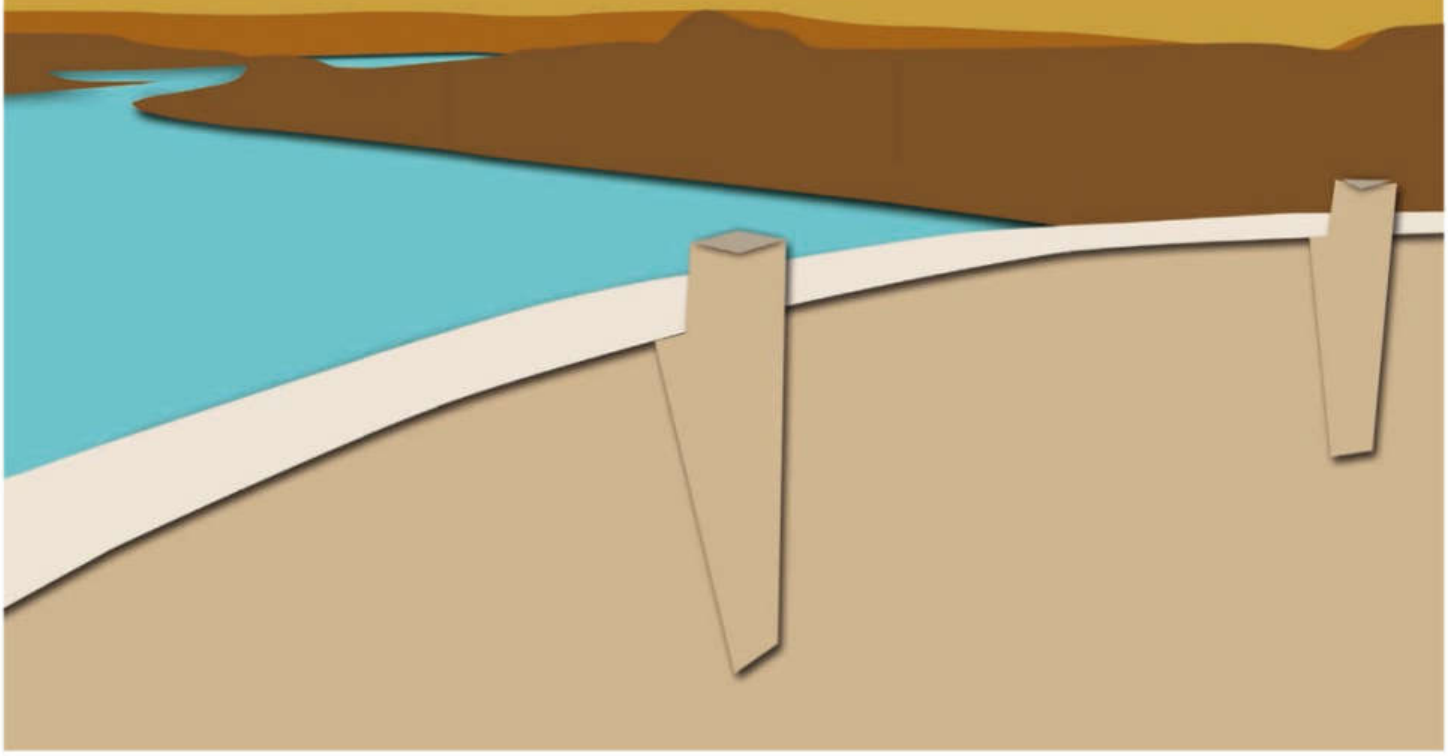
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A Nigerian refugee receives aid aboard the rescue ship *Phoenix*

62 S.O.S.
The Mediterranean crossing from Libya to Italy is the most dangerous migrant route on earth. That hasn't deterred thousands of refugees from launching their boats—and it hasn't stopped Christopher Catrambone, a Louisiana entrepreneur who's out to save them. BY JOSHUA HAMMER

72 THE PATH OF BETA FLASH RESISTANCE
The route setters who put up the bouldering problems at climbing gyms and competitions are an elite tribe of fiendishly clever puzzle-masters who delight in the contortions that their crimps and jugs force climbers to make. BY BRENDAN BORRELL

80 PEAK HAVANA
The best time to visit Cuba has always been yesterday, back when you could still find good music and a great mojito down a cobbled street, before Americans like us came and ruined it. Or at least that's the legend. PATRICK SYMMES makes the case that Havana's golden age is happening right now.

86 TRIM TOWARD THE LIGHT
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COVER: PROP STYLING BY YANI MONZÓN

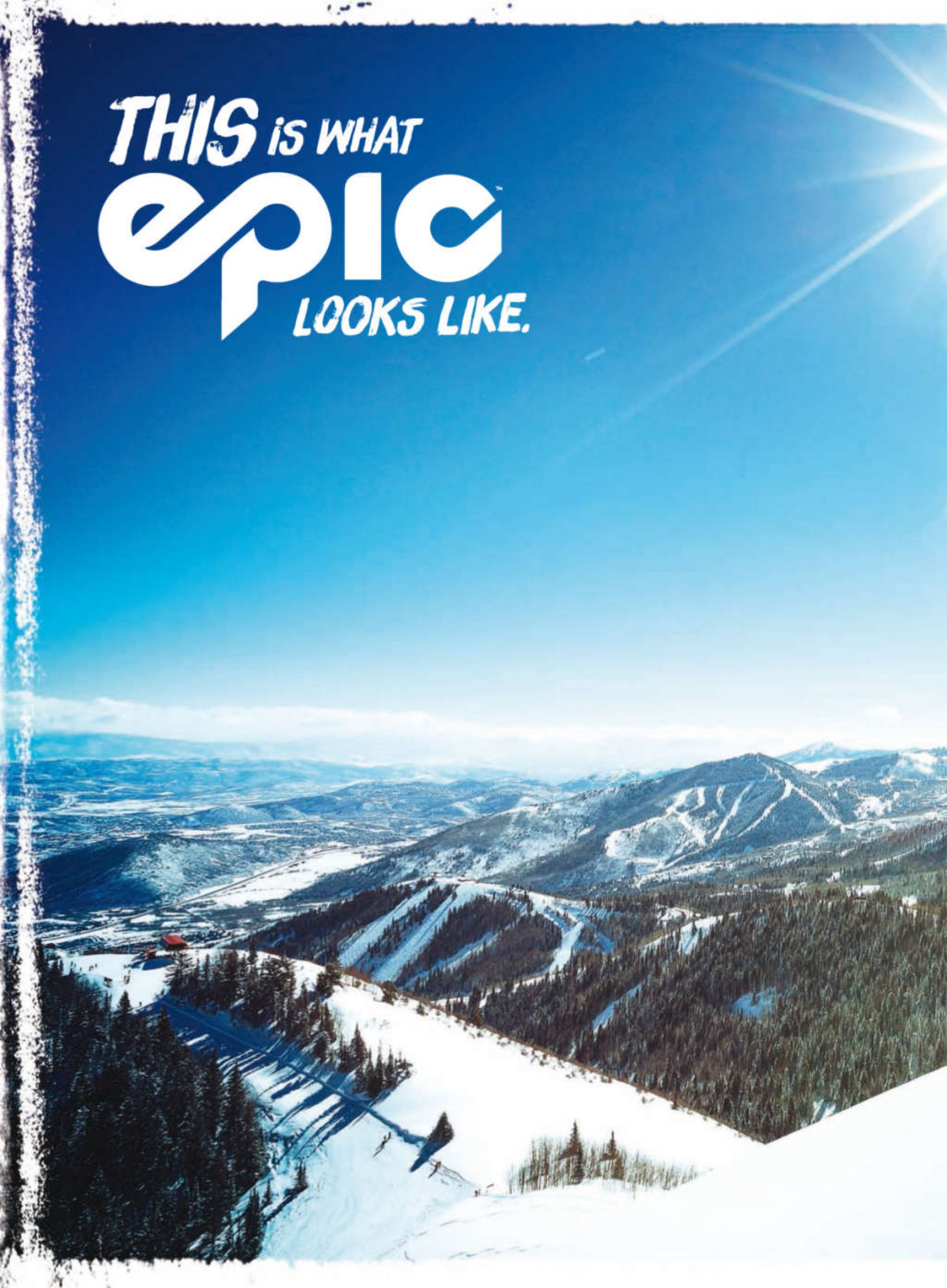
Cover photograph by DUSTIN SAMMANN; this page by MARCO DI LAURO


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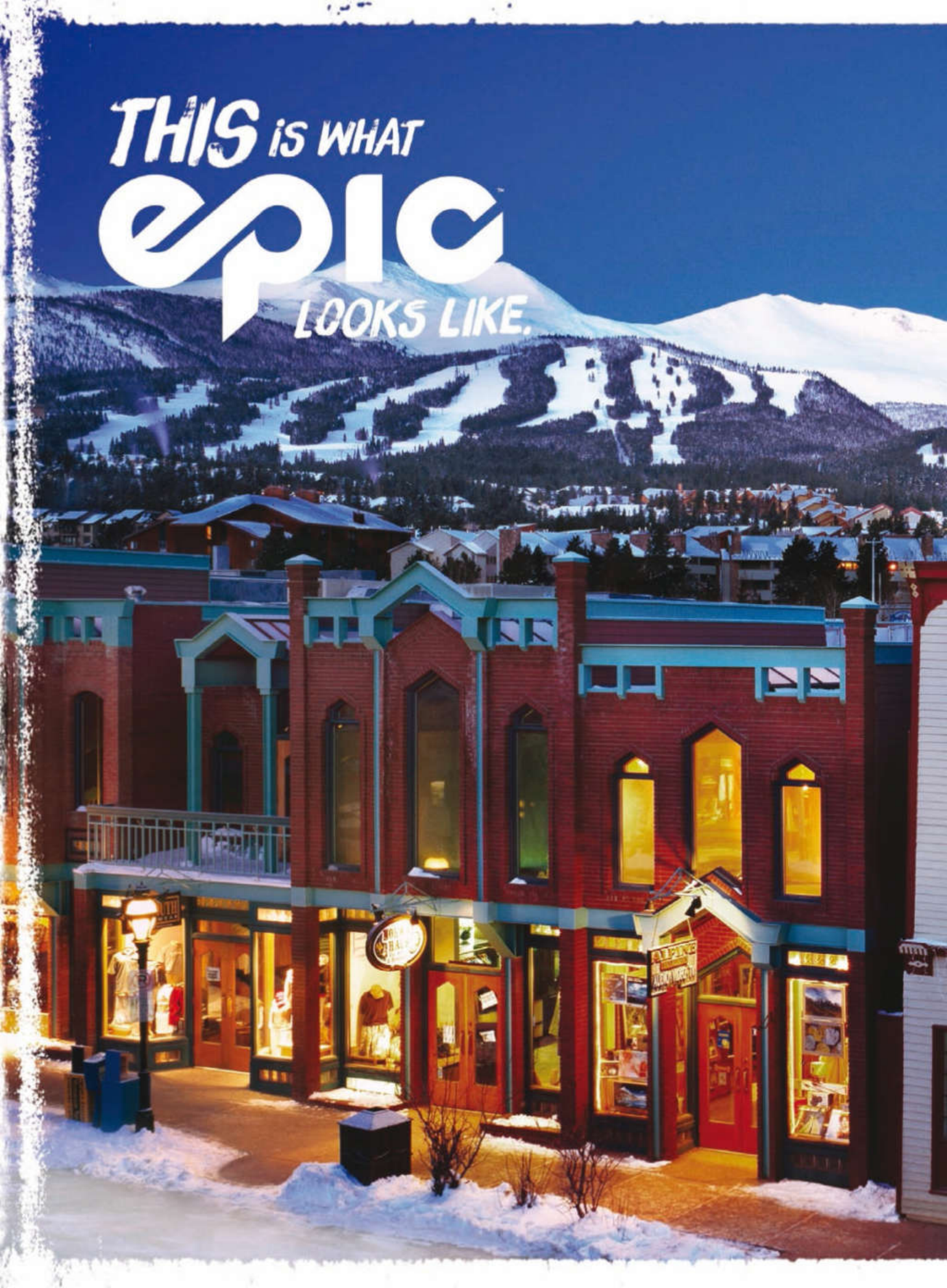


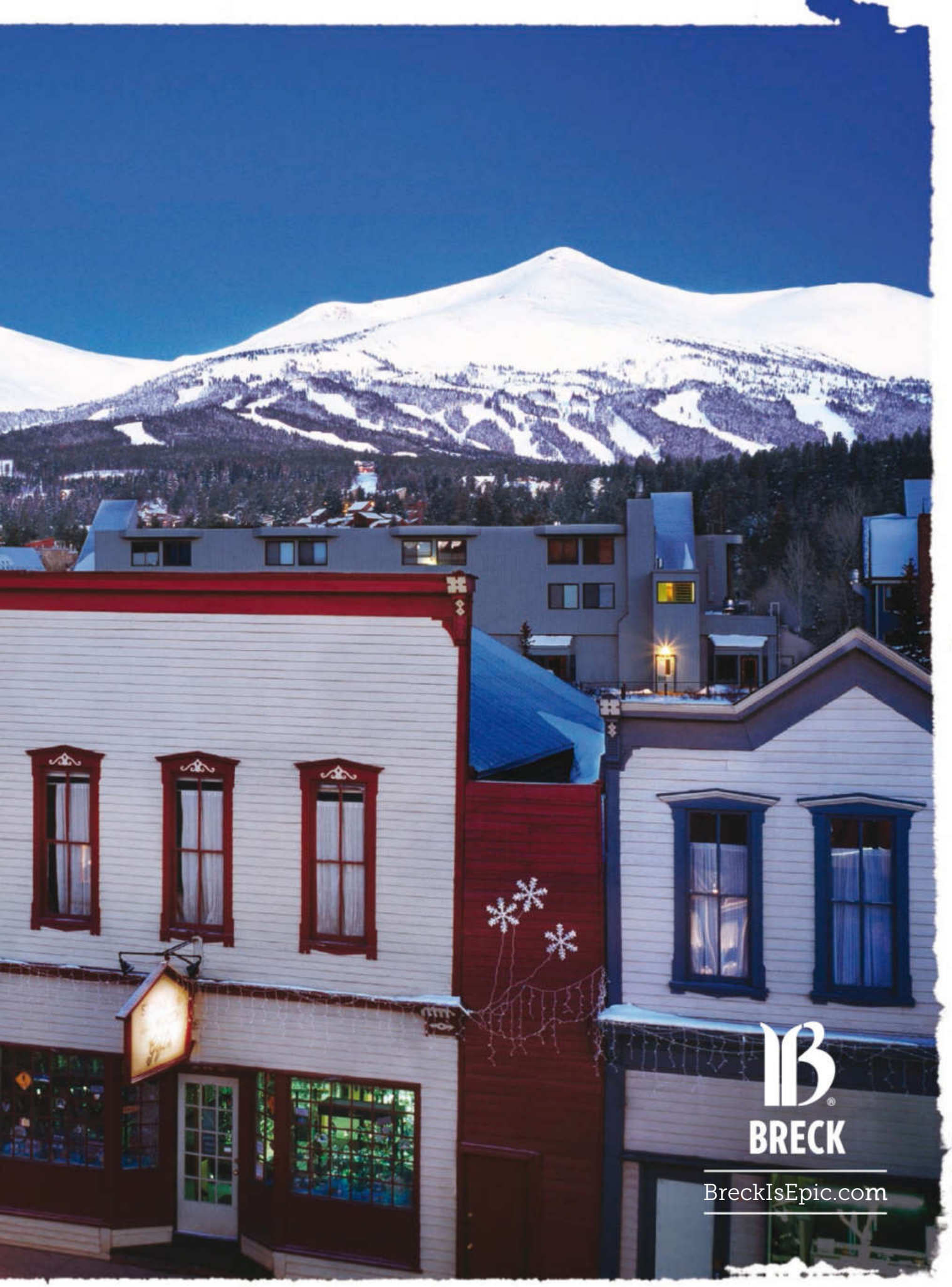
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"ON MY OWN, I THINK I'D BE A GOOD SKIER, NO BIG DEAL. BUT WHEN I COMBINE IT WITH CLIMBING, THE MEETING OF SPORTS HAS DEFINITELY PLAYED IN MY FAVOR."
—MOUNTAINEER HILAREE O'NEILL

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Business: The coolest new gear is made in Montana.
Games: The dream of action-sports fantasy leagues is becoming a reality.
Media: Paul Theroux turns his traveler's eye on Dixie. Plus: Ed Caesar on marathons, and what we're reading now.
Stunts: Jeb Corliss's crazy-ass Great Wall jump will be televised. But should it be?

40 DESTINATIONS
Ideas: From an Airbnb for adventurous car rentals to pain-free new ways to board planes, these are the innovations that are changing how we get out and see the world.
Plan of Attack: Off-season in the Grand Canyon, three ways.
Base Camp: A sprawling lodge in Chile's adventure capital.

50 BODYWORK SPECIAL
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92 STYLE
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94 ESSENTIALS
Wanted: A positively presidential rowing machine.
Spectrum: Workhorse jackets for fall's fickle weather.
Stress Tested: Gravel grinders and other adventure bikes that power over anything. Plus: the best accessories for rough riders.
Tools: Cutting-edge knives.

plus

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CLOCKWISE FROM TOP: JEFF LIPSKY; JILL GREENBERG; INGA HENDRICKSON; FRANK KAPPA/GALLERY STOCK


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RYAN MOSS

In 2014, Moss, who lives in San Jose, California, overcame his fear of heights while solo-hiking the two-foot-wide paths of Hawaii's Koolau Range in five days—record time. Last February, he captured his friend Hunter Williams summiting the steepest peak of the nearby Olomana Trail. "Just as he reappeared, the clouds parted," Moss says. "Seeing him along that crumbly, dangerous ridgeline reminded me of what I'd gone through and of everything I was doing as a mountaineer in Hawaii."

THE TOOLS: Canon EOS 7D, Tokina 10–17mm f/17 lens, ISO 100, f/5.6, 1/250 second



ELLIOTT BERNHAGEN

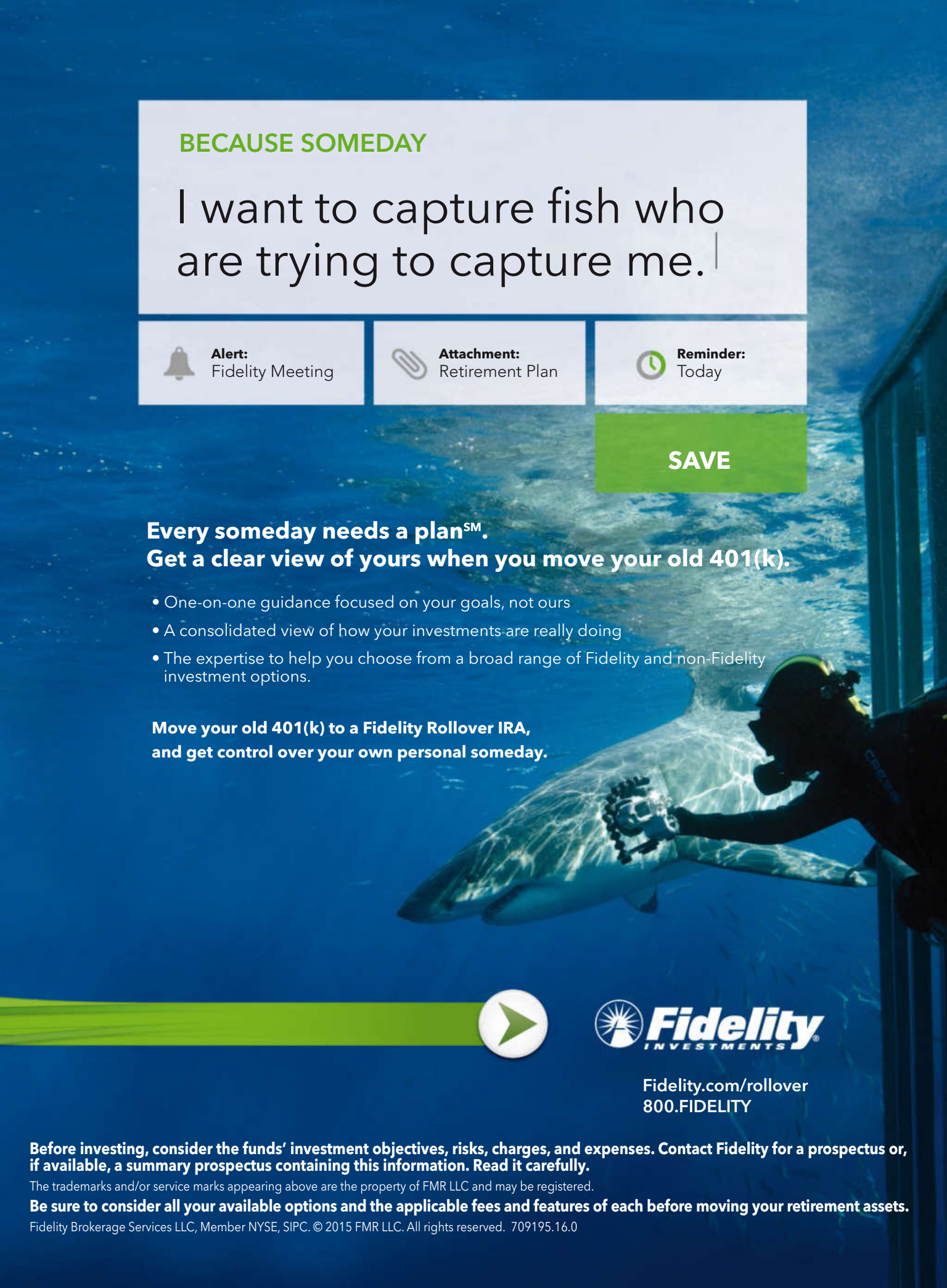
Bernhagen, of Sandpoint, Idaho, was in western Colorado last October to capture the area's exploding fall colors. In Glenwood Springs, he met Conor Ward, whose favorite after-work activity is BASE jumping at Glenwood Canyon. After a half-hour hike to the cliff one evening, the photographer rappelled 100 feet to capture Ward after his launch. "There was a loud rush as he took off, then I caught him isolated above the horizon," says Bernhagen. "When we got to the bottom, he had a big smile on his face."

THE TOOLS: Canon 5D Mark III, 16–35mm f/2.8 lens, ISO 1,000, f/5.6, 1/400 second


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NICK KELLEY
Last May, Kelley spent four days on the Colorado River in a 40-year-old wooden dory with photographer Ryan Heffernan, *Outside* senior editor Grayson Schaffer, and OARS crew member Blake McCord. Halfway through the third day, the group stopped at the Vishnu Basement rocks—at 1.7 billion years old, the Grand Canyon's most ancient—and McCord set to work. "I got the sense that Blake likes climbing even more than he likes guiding," says Kelley, an associate editor at Outside Online. "When climbers see rock that unique, they can't help themselves."
THE TOOLS:
Canon 5D Mark III, 16–35mm f/2.8 lens, ISO 160, f/5.6, 1/250 second



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"SIMPLE ADVICE. WE SHOULD GO TO HAVANA, NOT BEFORE IT CHANGES BUT SO THAT IT DOES CHANGE. SO THAT IT CAN CHANGE. THE MOST AUTHENTIC CUBA IS THE ONE STILL TO COME." —*PATRICK SYMMES, PAGE 80*

Perfect Pitch

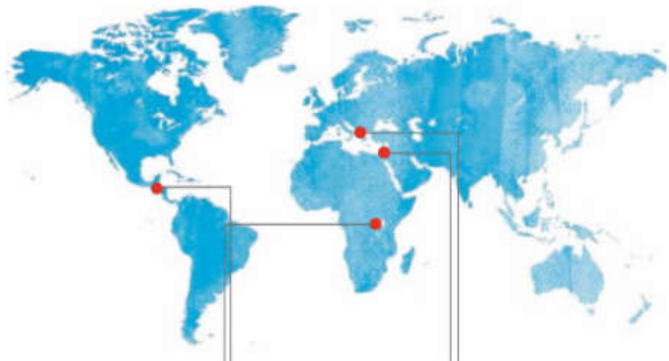
Whenever I tell someone what I do for a living, chances are high that they'll ask me some version of: How do you decide what makes a good *Outside* story? I've never managed a succinct answer. The truth is, after reviewing thousands of pitches over the years, I still don't have any guiding principles. When I try to apply rigor to the process, I always fail. I overanalyze a promising idea—the topic was written about elsewhere, it's too expensive to report, the writer who proposed it is too green—and then regret it later on when I take a pass. (Fortunately, I have colleagues who tell me I'm crazy when I'm in danger of doing this.) Instead, I go on feel. The best stories we publish, the ones readers love as much as I do, all start out as ideas that don't require me to think at all. Something about the writer's passion for the topic or their surprisingly unique take on it makes me say: I need to have that.

That was the case with all four of our feature stories this month. Like everyone else, when President Obama began normalizing relations with Cuba, I wondered what it would mean for the future of the most mythologized destination in adventure travel. We knew the best person to answer that was contributing editor Patrick Symmes, whose rich personal history with the ever evolving country gives him a perspective on the place that you won't find anywhere else ("Peak Havana," page 80). The pitch that led to Joshua Hammer's story ("S.O.S.," page 62) can be boiled down to this: on a whim, a young American multimillionaire staked his fortune on a rescue boat to help African refugees—and has saved countless lives. Who wouldn't want to read that? Several years ago, we highlighted the boom in indoor climbing, a trend recently confirmed when *The New York Times* deigned to gave it serious coverage. Brendan Borrell goes beneath the surface, however, spotlighting the elite professionals who set the toughest indoor routes ("The Path of Beta Flash Resistance," page 72). Finally, associate editor Matt Skenazy chronicles a close friend's agonizing struggle with PTSD and the search for rehabilitation through surfing ("Trim Toward the Light," page 86). I've seen dozens of ideas on using wilderness therapy to work with PTSD sufferers, but Matt's intimate access offers something completely different—something we aim for with every story we run.

—CHRISTOPHER KEYES (@KEYESER)







CLOSE CALLS
For this month's "S.O.S." (page 62), contributing editor **Joshua Hammer** joined a refugee rescue mission in the Mediterranean Sea. In more than three decades as a journalist, Hammer has made a career out of running toward a crisis.

Guatemala, 1990
"It was one of the most haunted places I have ever visited. After the civil war, the stench of bodies and an atmosphere of palpable violence filled those mountains."

Rwanda, 1994
Covered the conflict for *Newsweek*.

Kosovo, 1999
Traveled to the war-torn region three times to write about the massacres and NATO intervention.

Israel, 2001–04
Served as *Newsweek*'s combat correspondent in Jerusalem during the Second Intifada.

PAIN IS TEMPORARY. GLORY IS FOREVER.
Peter Vigneron's online-only "Inside the Most Dangerous Bike Ride on Earth" takes a look at Red Bull Rampage, the annual downhill competition. (Read the story at outsideonline.com/rampage.) To report it, Vigneron attended last year's event. What stood out the most? Kelly McGarry's horrific crash, in which the New Zealander overshot a 75-foot canyon gap by 25 feet. McGarry survived with barely a scratch. His bike didn't fare quite as well.

THE LINE
Hilaree O'Neill is a skimo legend ("Above It All," page 26). What's skimo? It's short for ski mountaineering—and it isn't the only portmanteau in the outside world.



CLOCKWISE FROM TOP LEFT: GRAYSON SCHAFFER; DEAN TREML/RED BULL VIA GETTY; DOMINIK PABIS/ISTOCK; JESSIE REEDER/GETTY; LESLIE WEST/GETTY; PETER DAZELEY/GETTY; ED DARACK/SCIENCE FACTION/CORBIS; BUSYPIX/ISTOCK

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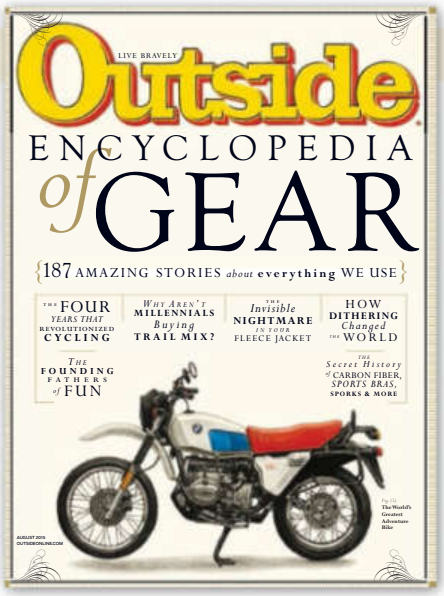
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FEEDBACK

ENCYCLOPEDIA OF GRIPES

In August, we published a special issue: the Encyclopedia of Gear. We were proud of it and couldn't wait to hear what readers thought. Given the departure from the norm—the entire issue was illustrated—we weren't surprised that reviews were mixed. Twitter response was glowing, but the e-mail we got contained a litany of complaints. Readers missed the photography, found the index confusing, and felt like they were reading Trivial Pursuit cards. Thankfully, some late-breaking accolades bolstered our spirits.

Photography has always been an *Outside* strength. Not digging the J. Peterman–like line drawings.
JOHN PUERNER
SANTA FE, NEW MEXICO

Even flipping page by page through the magazine, I couldn't find the article for the cover line "Why Aren't Millennials Buying Trail Mix?" *Trail mix* isn't in the index. *Millennials*? Nope. I still haven't found it.
LARA GARDNER
PORTLAND, OREGON

"The Young and the Tentless," about how gear companies are struggling to connect with younger consumers, appears under Youth and can be found on page 92.

A hat tip for including the Westfalia camper, but you missed a classic repair. Those engines were prone to burning exhaust valves, particularly the number three valve, which would crash into the piston, bringing an immediate end to a trip and a pricey repair: $300 to $1,500 in mid-seventies dollars.
NOEL WARD
AMHERST, NEW HAMPSHIRE

NUMBER CRUNCHER

Wearable tech is giving us the tools to track fitness data and lifestyle habits like never before ("The Metric System," page 50). No one in the office has embraced the trend as eagerly as online editor Scott Rosenfield, who keeps tabs on his cycling mileage, number of calories burned, work productivity, and much more.

92%
Drop in miles ridden from 2013, when Rosenfield was a Cat 2 racer, to 2014, when he became online editor.



eighteen
Average number of weekly meetings.



6
Task-management apps tried—and abandoned—in 2015.



WEDNESDAY
Least productive weekday. "That's when new episodes of *Law and Order: SVU* air."



4.6
Average miles run or walked per day since Rosenfield purchased an Apple Watch—an 84.8 percent increase.

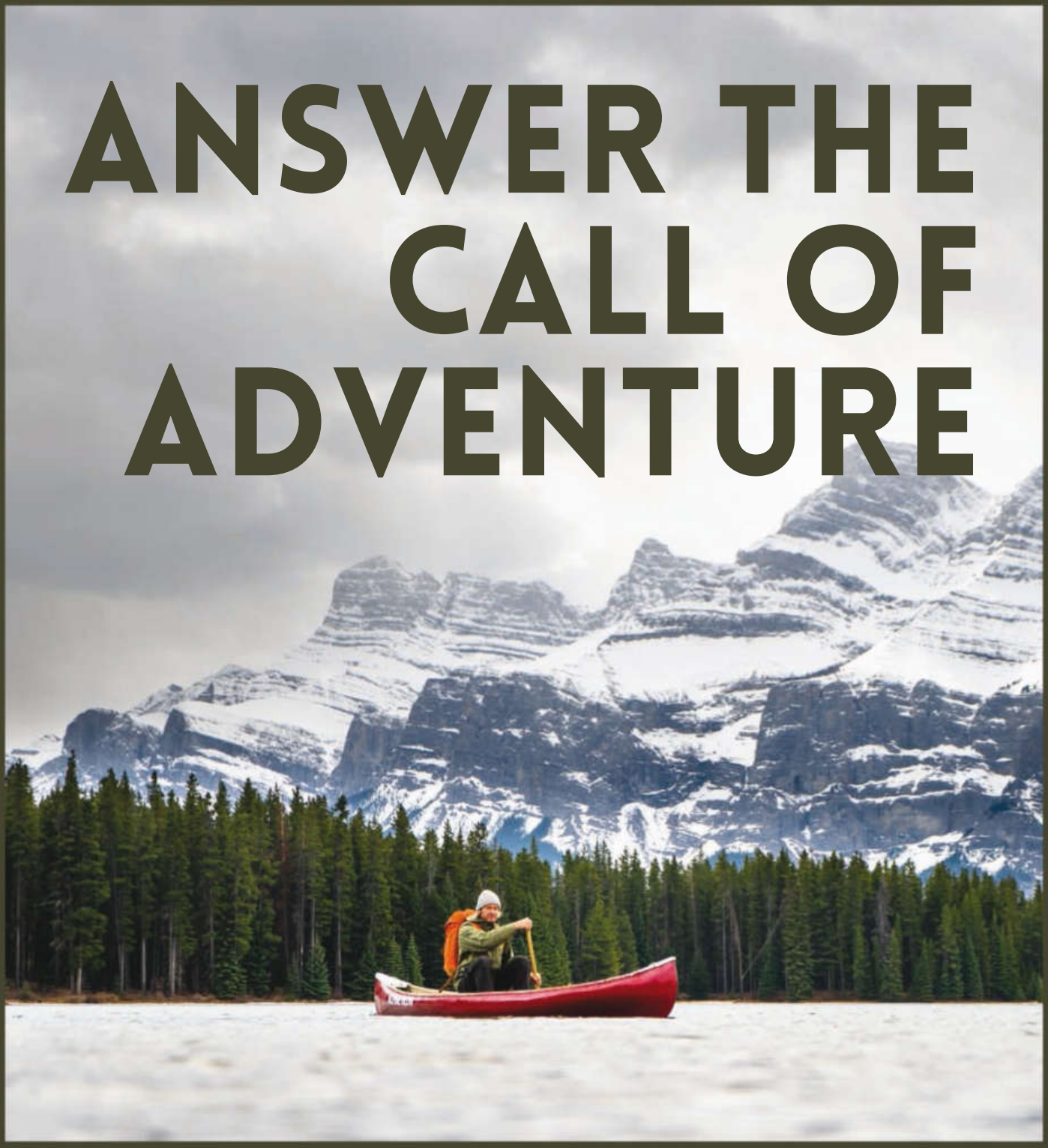


4,500
Number of calories consumed on a single day in 2015, 3,500 of them due to Churro Tuesday at a local bakery.



FROM TOP: TIM NORRIS; NBC-TV/THE KOBAL COLLECTION/CHRIS HASTON; STOLK/ISTOCK; MICHAEL PARMELEE/NBC; COURTESY OF SCOTT ROSENFIELD; JOHN AND LISA MERRILL/GETTY

ANSWER THE CALL OF ADVENTURE

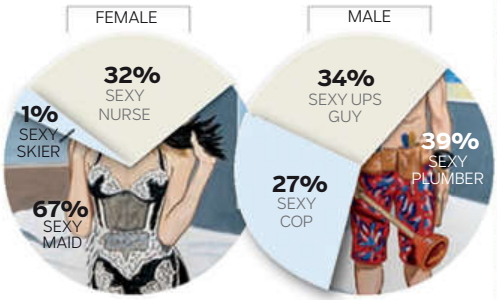


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RECEIVING NO VOTES: SEXY MAGAZINE EDITOR

This month's "Your Big-Wave, Super-G Fantasy" (page 34), about the rise of action-sports fantasy leagues, includes a visual pun of sorts—a racy illustration of Lindsey Vonn and Kelly Slater. Did we go too far? The question sparked some mild infighting around the office. But things got really contentious when editors were asked to vote for their sexy-costume cliché of choice.







GO WITH US

This fall, *Outside*'s outfitter, Outside GO, is launching trips to see the megafauna of Zimbabwe, the childhood home of the travel company's cofounder Sandy Cunningham. The nine-day trip begins across the border in Zambia, where travelers share the banks of the Zambezi with crocodiles and hippos. Along the way they'll stop at Victoria Falls, where they can swim or bungee-dive in Devil's Pool, and spend three nights at the truly epic Linkwasha Camp, in the heart of Hwange National Park. From $6,995; outsidego.com

FEEDBACK CONT.

I'm never going to spend $300 on a jacket that's overengineered for what I need ("The Young and the Tentless"), but I will spend $100 on a rain shell that works in town and on the trail. I don't know where these millennials are that have the dollars to throw down on crispy pressed flannel from designer brands, but they don't live here.

BRIANNE SABIN
PORTLAND, OREGON

Though I may not be interested in every article in your magazine, I usually enjoy the majority of it. But in the August issue, there was absolutely nothing I found interesting. If I want to know the history of a piece of equipment, I'll look it up on Wikipedia.

DENIS MCAULIFFE
WESTERLY, RHODE ISLAND

Bravo for the out-of-the-box approach. The illustrations are beautiful, and your stories about everyday items have really stuck with me. CamelBak started out as an IV bag dropped into a sock—who knew?

THOMAS CLUDERAY
WASHINGTON, D.C.

Thanks, Thomas. We needed that.

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FACEBOOK COMMENT OF THE MONTH:
Brent P. Evans Article title update: Trustafarian-hipster cookout essentials. $450+ of terrible suggestions.
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WHAT WE'RE WATCHING THIS MONTH

Starting in October, Outside Television will air coverage of Primal Quest 2015, the insane seven-day, 400-mile adventure race near Lake Tahoe, California. The nonstop event is designed to test the physical endurance and mental fortitude of 40 teams of four as they navigate, trek, mountain-bike, paddle, ascend, and rappel their way across the Sierra Nevada. outsidetv.com

"Out of the corner of my eye, I saw this big cloud of snow coming toward us. I pointed at it and said, 'What the hell is that?'"

—FAYE KENNEDY IN "IT'S ALL GONE," AN ORAL HISTORY OF THE APRIL 25 EARTHQUAKE IN NEPAL; READ IT AT OUTSIDEONLINE.COM/LANGTANG

NOTABLE EXCEPTIONS

For August's Encyclopedia of Gear, we dove deep on the history of essential outdoor equipment and the people responsible for it. Not surprisingly, readers were quick to point out some glaring omissions.

DICK KELTY
"His backpack frames were seminal in enabling people to explore farther and longer."

SKATE SKIS
"You totally missed skate skis! They were the reason behind the U.S.'s only Olympic gold in nordic skiing."

JIM JANNARD
"No Jannard? I dare say he invented sports eyewear with Oakley."



CLOCKWISE FROM TOP: COURTESY OF OUTSIDE TELEVISION; COURTESY OF KELTY; DAVE ALLEN (2)



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O'Neill at home in Telluride, Colorado

NEWS FROM THE FIELD

DISPATCHES



Above It All

BEFORE MOUNTAINEER HILAREE O'NEILL COULD ATTEMPT THE FIRST SKI DESCENT OF 27,766-FOOT MAKALU IN NEPAL THIS SEPTEMBER, SHE HAD TO RECOVER FROM THE MOST DEMORALIZING CLIMB OF HER LIFE

by Jacob Baynham

EARLY LAST November, Hilaree O'Neill was on a ledge roughly 1,100 feet below the top of Hkakabo Razi, pinned down by one of the harshest winds she'd ever experienced. Hkakabo Razi, in northern Myanmar, is believed to be the highest mountain in Southeast Asia, and O'Neill was leading a two-month expedition to measure the peak's true height. If successful, it would be only the second ascent of the relatively unexplored mountain, and a month into it her six-person team was coming apart.

O'Neill had spent two years planning the expedition, poring over Google Earth and World War II–era charts. (Modern maps of the area are nonexistent.) Her team of climbers—North Face athlete Emily Harrington, *National Geographic* writer Mark Jenkins, filmmaker Renan Ozturk, photographer Cory Richards, and Taylor Rees, the base-camp manager—had traveled across Myanmar, then marched more than 100 miles through dense jungle as their food supplies dwindled and gear was abandoned to save weight. Once on the mountain, they climbed for five days over false summits and up dead-end routes before finally, their strength diminishing, they neared the top. Up to this point, the climbing was similar to a

10.15

Photographs by JEFF LIPSKY



Woman Versus Mountain
Few expeditions have ventured to the world's fifth-highest peak, but O'Neill has been working toward this for a long time.

MAKALU
May 1955: Frenchmen Jean Couzy and Lionel Terray summit via the north col.
May 1977: An American team fails to climb the mountain via the west face.
May 1990: American Kitty Calhoun is the first woman to summit.
May 1997: A five-member Russian team summits via the west face.
January 2006: French mountaineer Jean-Christophe Lafaille disappears while making a solo attempt at the first winter ascent.
February 2009: The first successful winter ascent is completed by Italian Simone Moro and Kazakh Denis Urubko.

O'NEILL
December 1972: Born in Seattle.
March 1996: Wins the European Women's Extreme Skiing Champion, Chamonix, France.
January 1999: Makes first female ski descent of Bubble Fun Couloir, on Wyoming's Buck Mountain.
May 2002: Completes the first ski descent of all five Holy Peaks in Mongolia's Altai range.
October 2005: Skis from the summit of Cho Oyu without supplemental oxygen.
May 2012: Becomes the first woman to climb two 8,000-meter peaks—Everest and Lhotse—in 24 hours.

lot of other Himalayan peaks—snow packed into ice—but the group were unsure what conditions they would encounter on the narrow ridge leading to the summit.

At high camp, the team discussed the summit push. Everyone agreed that a three-person team would be best. As the conversation turned to who should go, O'Neill realized the men had already decided that she should stay behind.

"The guys were seriously distressed about the safety of the team," Jenkins later wrote in one of many expedition blog posts on *National Geographic*'s website. "It was unsafe and thus unwise for Hilaree and Emily to continue the climb. Emily readily acknowledged that she did not want to go any higher; but Hilaree was deeply, furiously offended… Would ego actually trump safety?"

Ozturk caught the confrontation on film in *Down to Nothing,* a documentary about the climb, which premiered last May at Mountainfilm in Telluride.

"You don't think I can do this and be strong and fast on it, fast enough to get us there," O'Neill says in the film.

"You're taking it personally," Jenkins says.

"Of course I am."

As a ski mountaineer, O'Neill had covered similar terrain the year before on Papsura, a 21,165-foot peak in India. She believed that she had the strength and the résumé—35 expeditions over 15 years, ranging from mellow climbs like Kilimanjaro to a difficult ascent of Mount Waddington in British Columbia—to reach the summit. But most of all, she was shocked that the men had come to a decision without consulting her.

"I was totally stunned by that sort of betrayal," O'Neill recalls now. "I was also really pissed off."

Both Jenkins and Ozturk maintain that they were merely starting the discussion about who was best suited for the technical summit push. (Richards could not be reached for comment.) Jenkins pointed out that O'Neill had been nearly hypothermic upon reaching high camp, and Ozturk said that the men had more experience with the fast, technical climbing ahead of them.

"We were trying to have an open conversation about how we could summit safely," says Jenkins.

Over the next several hours, the men tried to talk O'Neill out of climbing the last stretch of the peak. "It was like musical tents, everyone cycling through," Ozturk says. Tempers flared. At one point in *Down to Nothing,* O'Neill says, "I'm going to say one thing, and it's not going to be nice. Fuck you, Mark, for the vote of confidence."

Richards eventually got tired of the arguments and said he'd give O'Neill his spot. But come summit day, she felt that conditions were too harsh and her ability to lead had been compromised. She backed down.

It wasn't mountaineering's first disagreement, but it was one of the most widely publicized. Ultimately, the men abandoned their summit attempt, pushed back by wind, cold, and a treacherous approach. Tired and hungry, the whole team descended Hkakabo Razi and trekked back through the jungle for two weeks on a diet of nettle soup and rice. O'Neill returned to her family in Telluride, rail thin and depressed.

"It nearly broke me," she says. "It was almost my retirement trip."

IF THIS HAD been O'Neill's final expedition, it would have capped an impressive career. The 42-year-old is the first woman to have climbed both Everest and neighboring 27,940-foot Lhotse in 24 hours. (She did it on a sprained ankle.) She skied from the summit of 26,906-foot Cho Oyu, the world's sixth-highest mountain, without supplemental oxygen. She climbed Kilimanjaro with a broken leg. She has made first ski descents of big peaks in Mongolia, India, Russia, and Greenland.

The youngest of three children, O'Neill started skiing at age three in Seattle. In winter, she rode the bus to local ski area Stevens Pass with her brother and sister. In summer,

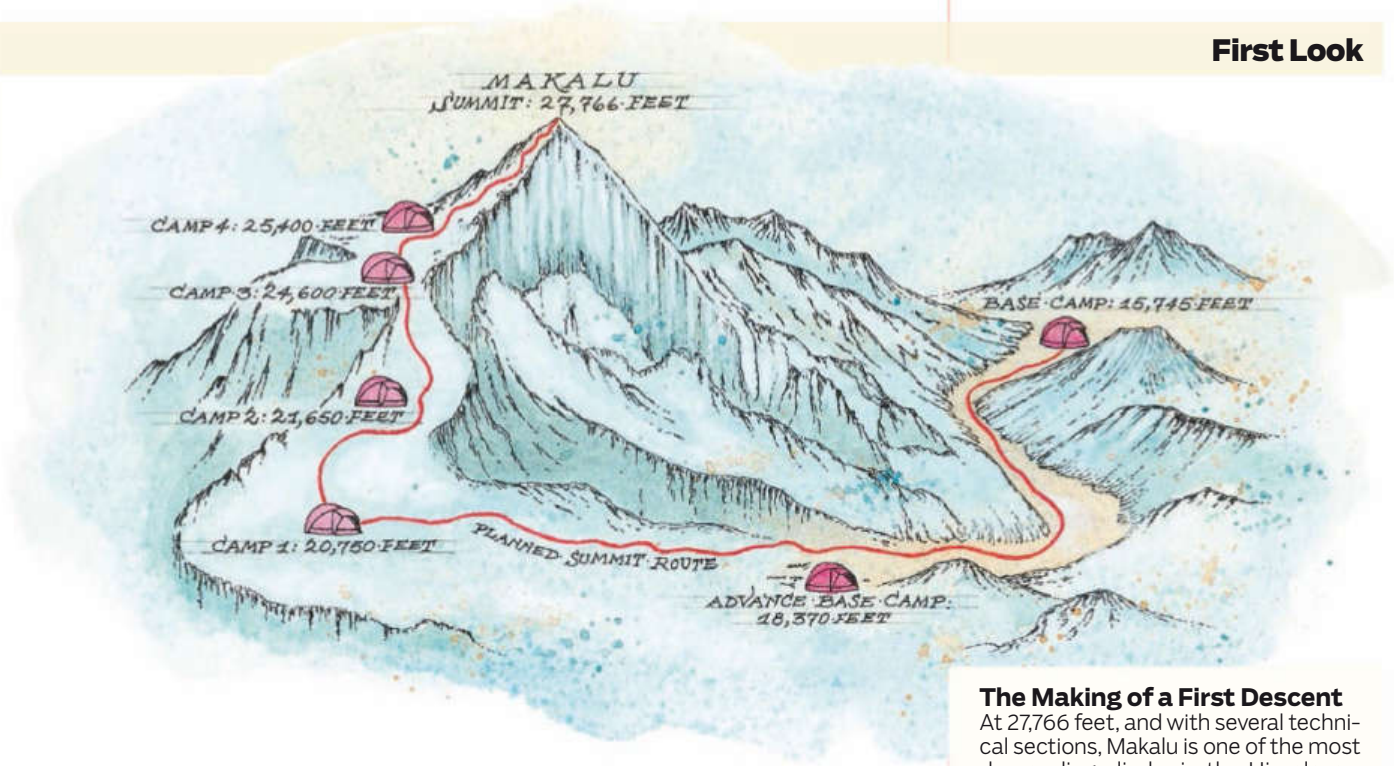


ANYWHEREALOHA™

The Pacific is what separates Matt Ortiz and Sean Woolsey, but it is also what unites them. Matt's treehouse murals celebrate a life of surfing and exploring Oahu's natural wonders, while Sean designs furniture and skateboards a few blocks away from his favorite California break. They got together to collaborate over wood, waves, and the aloha that comes from sharing their crafts.

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The Making of a First Descent
At 27,766 feet, and with several technical sections, Makalu is one of the most demanding climbs in the Himalayas. Here's how the team plans to do it.

she traveled the Inside Passage on the family's boat. She learned to climb between biology courses at Colorado College. After graduating, she left for Chamonix, France, where she planned to spend a winter. She stayed five years, working as a cycling guide and freeskiing on her days off. She became the European Women's Extreme Skiing champ in 1996, but it wasn't until she took up alpine climbing that she found her niche.

"On my own, I think I'd be a good skier on big mountains, no big deal," she says. "But when I combine it with climbing, the meeting of sports has definitely played in my favor."

In 1999, O'Neill joined ski mountaineer Mark Newcomb and photographer Chris Figenshau to ski the Bubble Fun Couloir on Wyoming's Buck Mountain, a precipitous line that ends at a 200-foot cliff. It was the first female descent, and it launched O'Neill's career. "I really didn't know what I was getting myself into," she says. "It was really steep. It was a bigger deal than I knew at the time."

Three weeks later, the North Face put her on a plane to the Indian Himalayas for her first expedition, up 19,688-foot Deo Tibba. She started rolling through trips at a rate of three or four a year. In 2001, she became a paid North Face athlete.

"I didn't even know this lifestyle existed," she says. "The door was wide open for me in the beginning."

O'Neill's athleticism and stoicism have won the admiration of other climbers. "I have enormous respect for her," Jenkins says. "She's the toughest woman I've ever met."

"She's got presence, charisma, confidence, and she's incredibly strong" says mountaineer Conrad Anker. "Just getting to the base of that mountain in Myanmar was an incredible feat."

IT TOOK O'NEILL months to get over the Hkakabo Razi ordeal. The mental and physical aspects were exhausting enough, but she also felt that Jenkins had publicly vilified her in one of his posts. (O'Neill wrote her own account of the climb for the North Face's website, leaving out the group dynamics.)

To recover back in Telluride, she skied, hiked, and spent time with her husband, Brian, a realtor and an accomplished skier, and their two sons—Quinn, eight, and Grayden, six. She has considered scaling back her mountaineering trips to be with her family more often. "It's hard to return from an expedition to that day-to-day humdrum of life, having to pay bills, go grocery shopping, and clean toilets," she says.

It affects her relationship with her family, too. Brian looks after the boys while she's gone, and she sometimes envies their closeness. "I feel like an alien when I come home," she says, "like a stranger in the house stepping into the routine and getting in the way."

Sometimes she imagines finding another sport—endurance running, say—that she can do during the day and still coach her boys' soccer games in the evening.

But O'Neill isn't very good at scaling back. When Quinn was ten months old, she left for a two-month expedition to attempt the first female ski descent of Gasherbrum II in Pakistan. (Conditions forced her to turn around at 24,600 feet.) "I look back now and think, Wow, that was probably a little aggressive," O'Neill says, although she notes that male climbers with kids are rarely questioned about the risks they take.

When the opportunity arose to join Harrington and her boyfriend, mountaineering guide Adrian Ballinger, in attempting the first ski descent of Makalu, the world's fifth-highest peak, O'Neill signed on.

She also decided to incorporate some family time into the expedition—this year, Brian and the boys will join her on the ten-day trek to Makalu base camp in August. (Teacher: "What did you do on your summer vacation?" O'Neill boys: "Trekked to Makalu so Mom could make the first ski descent.")

O'Neill will then climb with Ballinger, Harrington, and pro skiers Jim Morrison and Kit DesLauriers, the first person to ski the Seven Summits. Makalu is one of the Himalayas' most difficult peaks, with steep ice and a technical rock ridge before the summit. "It's a beautiful mountain," O'Neill says. "My goal is to climb it without oxygen. But it's a much harder climb than Cho Oyu, and I'm ten years older."

Whether she's successful is secondary to the effort itself. "I have this intense fear of every day being the same," O'Neill says. "Mountaineering gives me a way to keep my life somewhat uncomfortable." *O*

Follow O'Neill's progress on Makalu at **outsideonline.com/makalu**.

Map by MIKE REAGAN

ADVERTISEMENT



Sean (left) and Matt in Sean's studio


The next batch of Woolsey Land Cruisers


California cruiser ride

Fueled by Aloha

When Matt Ortiz and Sean Woolsey met, they quickly realized they had much more in common than both being artists—starting with skateboarding and a free-flowing spirit

Ask any native Hawaiian and you quickly realize aloha is much more than a sign of welcome. Equal parts joyful greeting, respectful blessing, and humble wish, it's a way of life and a unique sense of warm generosity. Matt Ortiz defines the aloha spirit as "sharing laughter, experience, generosity, and a good time." Which is exactly what the Hawaiian artist did when he visited fellow creator Sean Woolsey in his Costa Mesa, California, studio as part of OluKai's Anywhere Aloha campaign, which brings together pairs of like-minded souls, one from Hawaii, the other from the mainland.

When Matt arrived in town, the two toured Woolsey's neighborhood on skateboards. These weren't just any old wheels—Matt and Sean both make their own boards.

"Sean has these really rad skateboards he's been building that blew my mind," says Matt. "His boards, called Woolsey Land Cruisers, are so clean and professionally produced. Mine were reused floorboards," he says, laughing, "but it was fun to try each other's boards."

In addition to a shared passion for skateboarding, Matt and Sean also have a shared passion for surfing and the Pacific that infuses their work with a joyful energy. The only difference is how they channel those creative forces.

Matt owns a creative consulting company, Wooden Wave, with his wife, Roxy. Their studio, with surfboards hanging from the ceiling, is in downtown Honolulu a block from the beach. The two design murals and whimsical treehouses that promote sustainable ways of living, with aquaponic systems, solar panels, and, always, a halfpipe incorporated somewhere into the design. The couple's Instagram feed, Wooden_Wave, is playful yet architectural—Dr. Seuss meets Frank Lloyd Wright.

"Sean has these really rad skateboards he's been building that blew my mind," says Matt. "His boards, called Woolsey Land Cruisers, are so clean and professionally produced. Mine were reused floorboards," he says, laughing, "but it was fun to try each other's boards."

"One of the things about living in Hawaii is that the resources are limited," says Matt. "We try to make a serious topic like sustainability fun and engaging. We love working with kids and how you can present alternative ways of living and inspire them to think, Oh yeah, maybe I can grow my own food or be the next inventor of a sustainable product."

On the mainland, Sean, a onetime clothing designer, builds furniture using tools handed down from his grandfather, with an eye toward "appreciating beauty in things that most people wouldn't find beautiful: old, aged, with character, and the stains of life," he says. While his furniture features clean, mathematical lines, made from wood, glass, and steel, Sean lets himself go in his artwork. Starting with sheet metal, he brushes on paints, patinas, and acids that react chemically with the metal. The result is a piece that often looks like an aerial photo of Mars.

Sean and Matt had never met before the weekend in Costa Mesa, but the connection was instant. "Matt's drawings are fully free-spirited," says Sean. "They resonated with me because they were so Hawaiian and also just so free-flowing and similar to my art process."

The other reason they got along so well: it's been one of Sean's lifelong dreams to build a treehouse. The artists may even collaborate on one, but first Sean wants to travel to Hawaii with his wife to spend some time hanging out with Matt and Roxy, soaking in what he calls the couple's Aloha Spirit of "welcoming and friendship and gratitude." And of course they'll surf.

"The first place I surfed was Waikiki," says Sean. "I was 14 years old and I remember on the second day I felt like I was going to drown, but my parents pushed me and said, 'It's tough, but you've got to keep trying, you've got to push on.'"

Sean pauses and adds, "Surfing is sort of like making art in that way."

*Learn more about OluKai and AnywhereAloha at **olukai.com/anywherealoha**.*

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Adam Sklar of Sklar Bikes

Big Gear Country

THERE'S A REASON ALL OUR FAVORITE TOYS ARE NOW MADE IN MONTANA

by Jay Bennett

WHEN ADAM SKLAR decided to start Sklar Bikes, which makes custom handcrafted cyclocross and mountain rides, he briefly considered locating his company in Boulder, Colorado, or Austin, Texas. Then the Montana State University student thought, Why leave Bozeman?

"I went to school here mostly to go skiing," says Sklar, 22. "But I loved being surrounded by people who are just as passionate about that as they are about their work."

That's been happening a lot in Bozeman lately. "People who come to Montana State for that well-rounded outdoor experience don't want to leave," says Brit Fontenot, Bozeman's director of economic development. The city has long been home to companies like Simms Fishing Products and Kletterwerks backpacks, but now young entrepreneurs are spread across the state, taking advantage of Montana's blend of outdoor access, quality workforce of recent grads, and business-friendly regulations like easy permitting procedures and no sales tax. According to the Kauffman Index, which tracks business growth in the U.S., Montana had the highest rate of entrepreneurship of any state in both 2014 and 2015.

Much of the growth is in tech. After Oracle purchased Bozeman cloud-software company RightNow Technologies for $1.5 billion in 2012, former executives began funding ventures around the state. Most of the money has gone to technology startups—which continue to attract young workers from California and the East Coast.

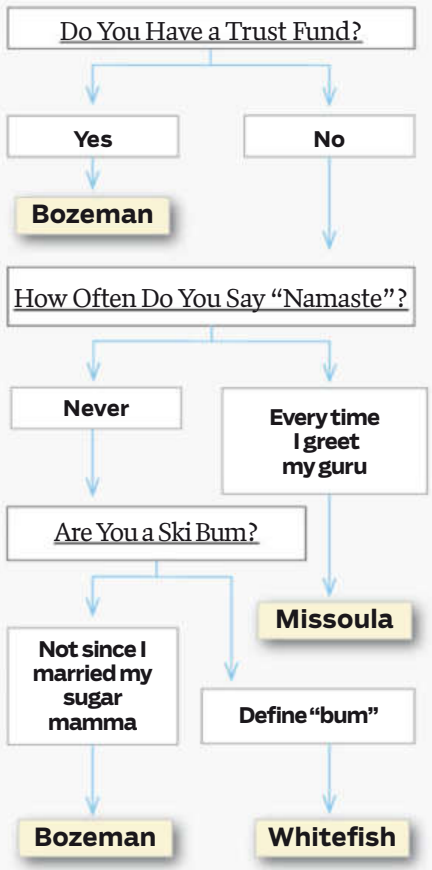
"You can't live here and not love the outdoors," says Greg Gianforte, founder of RightNow. "One of our first interview questions was, 'What outdoor sport do you enjoy?' "

Those tech workers are buying into the outdoor lifestyle; today, Montana craftsmen are as common as Silicon Valley coders. Dan Brown and Barbara Pfannkuch started Meriwether of Montana in Whitefish, where they design camping enamelware. James Behring moved from Michigan to Missoula to found Behring Made knives. And Alex Buck launched BuckProducts in Bozeman, focusing on durable commuter packs.

"There is a sense of community with other gear companies," says Buck. "Quality of life is more than just a perk here."

I Want to Move to Montana!

WE ALL DO, BUD. BUT IF YOUR BUSINESS PLAN IS SOLID, HERE'S HOW TO DECIDE WHERE TO SET UP SHOP.



Photograph by PAOLO MARCHESI

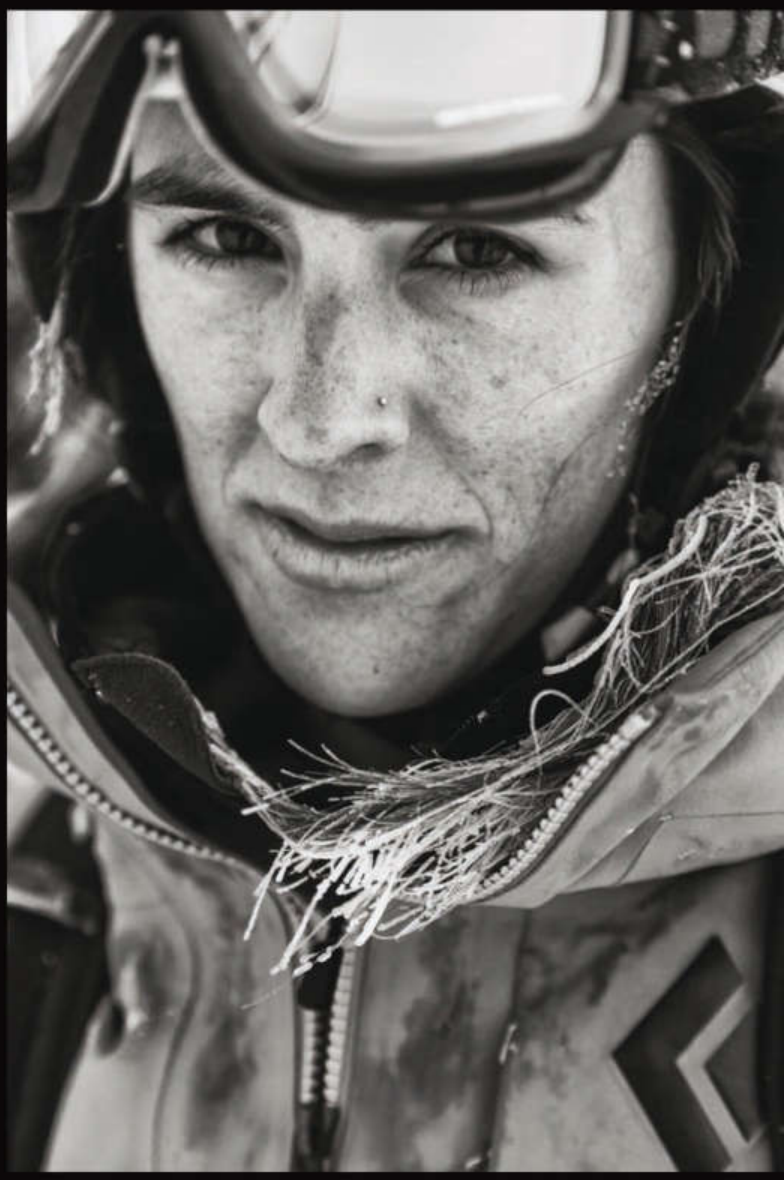


Shot of location at the Refugio Frey, Argentina. Photographer: Fisher Creative

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Your Big-Wave, Super-G Fantasy

NUMBERS-OBSESSED FANS ARE REINVENTING FANTASY SPORTS FOR THE SKIING, SURFING, AND FLY-FISHING SET

by Will Egensteiner

EACH FALL, while Michael Nyman's friends debate whether to draft Peyton Manning or Tom Brady for their fantasy football teams, Nyman digs into the numbers on Lindsey Vonn and Ted Ligety for his own league: Fantasy Ski Racer. Nyman started FSR in 2010 with his brother, Olympic downhill racer Steven Nyman, because they both like geeking out about the sport.

Over the past few years, broadcast networks, niche publications, and clutches of obsessed fans like the Nymans have developed leagues for everything from cycling (NBC's Fantasy Cycling Challenge) to fishing (Fishing League Worldwide's Fantasy Fishing) to surfing (*Surfer* magazine's Fantasy Surfer) in an attempt to replicate what has long been a big part of the growth of mainstream sports.

"If you can measure statistics, you can have a league," says Megan Van Petten, executive director of the Fantasy Sports Trade Association.

Lacking the resources of a CBS or an ESPN, which run their own fantasy leagues, action-sports upstarts have struggled to develop slick interfaces and intuitive scoring systems. "It has been hard to refine our game and have it make sense to the general public," Nyman admits.

Indeed, most Americans are familiar with how scoring in, say, football and baseball works, and the fantasy versions of those sports are structured accordingly. But developing rules for solo endeavors like ski racing can be difficult. In Fantasy Cycling Challenge, players are given a virtual budget to sign riders and are awarded points based on how they perform. FSR tried that model but found that it confused people. So in 2012, the rules changed: predict the top finishers, rack up points for being right.

Then the Nymans developed a mobile app to take advantage of the rules' simplicity. Today, the FSR app looks nearly as slick as those from Fox or Yahoo, and the league's user base has doubled to 12,000 since last season.

It isn't just about fun, though. Fantasy leagues are a chance for the sports to reach a broader audience. "Competitive skiing gets decent ratings in the U.S., but the networks don't show many races," Nyman says. "We're getting people exposed to that world."

Which is exactly why Phill Gross, a hedge-fund manager and trustee of the U.S. Ski and Snowboard Association, invested an undisclosed amount in FSR in 2012. Last year, Nyman was finally able to give himself a full-time paycheck for his work on FSR. And this year, Olympic skier and Universal Sports analyst Doug Lewis came on board as an expert blogger, a move that could help build the kind of end-to-end, 24/7 fantasy universe that mainstream leagues offer fans. After all, the more time they spend on the site, the more engrossed they become.

"You want to win, you want your name ranked," says Lewis. "To do that, you've got to do your homework."

Draft Guide

THREE ATHLETES WITH PROMISING COST-TO-PERFORMANCE RATIOS

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Mick Fanning
The Australian flies under the radar while racking up quarter- and semifinal finishes, leaving him in good position for end-of-season contention.

CYCLING
Luke Rowe
The Team Sky rider collected a string of top-ten finishes last year—look for him to improve on his surprise performance at Paris-Roubaix.

SKIING
Tim Jitloff
American GS specialist Jitloff went on a tear of top-ten finishes last year, including first in the GS at the U.S. Alpine Championships.

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An Arkansas farmer interviewed by Theroux for *Deep South*

American Beauty

AFTER DECADES SPENT WANDERING THE GLOBE, PAUL THEROUX TAKES A DOMESTIC DETOUR

by Rick Bass

VETERAN WRITER Paul Theroux has penned more than a dozen travelogues, most of them set in far-flung locations across vast seas. His most recent book, however, focuses on one of the most exotic and complicated places he's ever been: the American South. In *Deep South* ($30, Houghton Mifflin Harcourt), Theroux, who lives in Massachusetts, drives along southern back roads to visit churches—usually African-American ones—and small towns. He talks to those who've lived there for half a century or more—there are very few young people in the book, black or white—and is touched both by the great friendliness he finds in random encounters, and the hostility and mistrust.

As in his other books, Theroux is a stranger here and sometimes does that thing that Northerners do, teasing out racial tensions they suspect lie just below the surface. Those whose experiences or values Theroux finds resonant tend to keep the proper spelling of their gerunds and verbs, whereas those who voice offensive opinions are quoted phonetically—"givin'," "cain't," and so on.

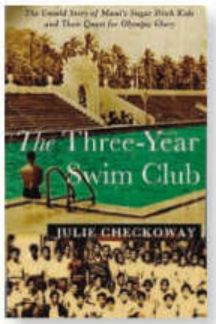
Despite all that, there are several stretches that qualify as tours de force in *Deep South*. The chapter on gun shows is terrifying for the vendors' and merchants' nonchalance about the trafficking in which they engage, and heartbreaking for the rage and loneliness that seem to be shared by everyone in attendance. A visit with a young quarry worker lamenting his broken marriage is as riveting as any encounter by Capote or Mailer, increasing in tension until it's almost unbearable.

But perhaps no chapter is more gripping than the one on the N-word. Here, Theroux displays his full journalistic talent—the ability to examine both sides of an issue without bias until his opinion emerges, like a dinner party guest who's had the good manners to let everyone else have their say first. About the Nasir Jones Hiphop Fellowship at Harvard, Theroux delicately quotes some of Jones' lyrics, then concludes: "Whenever an art form—music, book, drama, song—is dragged into the seminar rooms, it is finished as a force. Nothing is more deadly than the anatomizing of scholarship."

Usually, however, Theroux reserves his judgments and instead listens: to the poor and disenfranchised, many of whom are survivors of the civil-rights era and still barely hanging on. This is *Deep South*'s greatest strength—capturing voices that will soon be lost to time.

ALSO ON OUR NIGHTSTAND

Three other books to dive into this month



The Three-Year Swim Club, by Julie Checkoway ($27, Grand Central Publishing)

A made-for-the-screen story about a schoolteacher in 1940s Maui who teaches underprivileged Japanese-American students to swim and leads them to the Olympics.

The Invention of Nature, by Andrea Wulf ($16, Knopf)

A ripping biography of Alexander von Humboldt—a 19th-century naturalist who scaled volcanoes, inspired Darwin and Thoreau, and predicted climate change.

Boundless, by Kathleen Winter ($27, Counterpoint)

A richly detailed account of the author's voyages across Greenland, examining historic disputes and modern-day conflicts taking place at the top of the world.

Amount by which the world's best male marathoners must improve to break the two-hour barrier, according to Ed Caesar's fascinating new book, *Two Hours: The Quest to Run the Impossible Marathon* ($26, Simon and Schuster). The current record is 2:02:57. If the barrier is to be broken, he says, it could be in a "moonshot marathon," one where runners enjoy ideal weather conditions and an optimal mental state—perhaps the most important factor of all. Caesar describes one study in which cyclists riding at a faster pace than they could normally sustain were told that they were in fact riding at their PR pace. Most of them ended up setting new personal bests—by about 2 percent.

2.4%

Photograph by STEVE MCCURRY

Banquet

STANDING TALL HAS NOTHING TO DO WITH HEIGHT



GREAT BEER
GREAT RESPONSIBILITY

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THE 1936 STUBBY BOTTLE IS BACK



Wingsuit jumper Jeb Corliss plans to buzz the Great Wall of China at 100 mph. Is that a good thing?

BASE-Jumping the Shark

THE QUEST FOR EVER BIGGER AND MORE DANGEROUS TELEVISED WINGSUIT STUNTS IS GOING TO BOOST THE SPORT'S ALREADY HIGH BODY COUNT

by Matt Higgins

ON SEPTEMBER 18, sometime between 9 and 11 P.M. EST on NBC, Jeb Corliss will dive from a helicopter wearing a wingsuit, accelerate to 120 miles per hour, and, if all goes as planned, use the GoPro camera mounted on his helmet to hit an apple-sizedot on a target positioned 60 feet above the Great Wall of China.

The flight, billed as the Human Arrow, is the latest feat in a career of such stunts for Corliss, whose 2011 "Grinding the Crack" video, in which he dives at a balloon-holding accomplice on a mountainside in Switzerland, has been viewed more than 29.6 million times on YouTube.

These kinds of high-risk events have become an essential part of reaching audiences for television networks like Discovery and NBC, sponsors like GoPro and Red Bull, and, yes, media companies like *Outside*.

"The first thing people put on is their wingsuit, and the second is a helmet camera to shoot video of their jump," says Ian Mitchard, a 34-year-old wingsuit pilot from Moab, Utah, who has nearly 500 flights under his belt. "Things have gotten more dangerous as the sport has become commercialized."

In 2003, one of the most jaw-dropping wingsuit videos ever made featured Loïc Jean-Albert flying as little as 15 feet off the ground. It was originally released on DVD, before YouTube even existed. Flash forward to this summer, when Uli Emanuele, a relatively unknown 29-year-old from Italy, threaded a nine-foot-wide breach in a rock spire in Lauterbrunnen, Switzerland. His 150-second video, another GoPro-sponsored jump, racked up more than four million views in the first month. These days, video clips of terrain flying—skimming perilously close to the ground, without room to maneuver if something goes wrong—are the best way to attract attention. And the closer the better.

"New people are getting into it, and that's what they think the sport is," says Steph Davis, a 42-year-old professional climber and wingsuit pilot from Moab, Utah. "I've been wingsuit BASE jumping for eight years, and flying with no margin for error is not smart."

Visions of making it as a pro exert a powerful pull, but Corliss is one of only a few pilots who have the luxury of flying full-time. "People are chasing a dream," Mitchard says. "The financial rewards are not that great."

The costs, however, can be. Although a wingsuit pilot has yet to die on live TV, the sport has seen a tragic two years. Since 2013, more than 50 pilots have died while flying. In May, Dean Potter, 43, and Graham Hunt, 29, were killed in California's Yosemite Valley. In July, Jhonathan Florez, a 32-year-old Colombian who held the record for the longest wingsuit flight, crashed into a mountain in Switzerland. If the most experienced pilots are dying, what happens when novices try complex flights?

"On a long enough timeline, wingsuit BASE jumping will kill you," says Matt Gerdes, co-owner of Squirrel, a wingsuit manufacturer in Seattle. But he and other pilots I talked to take a libertarian approach: they think that wingsuiters will chase risky flights whether people are watching or not—and that that's OK. "If people want to kill themselves doing it, they should be able to," Gerdes says.

And, sooner or later, you can bet viewers will be tuned in when they do.

Photograph by TOM SOLO

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DESTINATIONS 10.15



New Frontiers

SEVEN IDEAS THAT ARE SHAPING THE FUTURE OF GOING PLACES, AND THE PEOPLE, COMPANIES, AND APPS MAKING IT A REALITY

(ONE)

Hipcamp is revolutionizing campsite booking.

ON NEW YEAR'S EVE in 2012, Marin County, California, resident Alyssa Ravasio drove a few hours south to camp in Andrew Molera State Park, at a coastal meadow in Big Sur. It was the perfect place, as she puts it, "to take in the first sunrise of the year." The only hitch: the park's website—a bare-bones dot-gov run by the state of California—neglected to mention a nearby surf break. A big swell was coming in, and Ravasio was caught without her board.

Inspired to create a better resource for campsite info and reservations, Ravasio, 27, learned how to code and launched **Hipcamp** in 2013. The site originally had 90 California state park campground listings, each with photos tracked down by Ravasio's sisters and friends. But it grew quickly, transforming into a sleek hub with stunning photos, detailed information on more than 8,000 campgrounds in 50 states, and search tools that allow you to filter by activity or browse on an interactive map. Today, Hipcamp boasts more than 250,000 active users, and the company raised $2 million last year.

Hipcamp's goal is to be a one-stop source for everything from learning about to securing a spot in the nation's campgrounds. Its main hurdle? The way the government handles reservations for public campsites. Since 2005, a company called Reserve America

PRIMO CAMPSITES
Our favorite private properties on Hipcamp

The Spot
UPSTATE NEW YORK
Sleep in the shadow of the legendary walls of the Shawangunks, then wake up for a full day of sending. $38

Heart of the Wild
CENTRAL CALIFORNIA
A perfect chance to sleep in a huge meadow overlooking the Pacific in Big Sur with a group of your friends. $300 for up to 15 people

The Domes
NORTHERN CALIFORNIA
No tent required here: a pair of off-the-grid geodesic-dome cabins, just steps from the Garcia River on the coast. $325 for up to ten people

PHOTOGRAPH CREDIT TK



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Go Further





has administered Recreation.gov and controlled campsite reservations for the Park Service, the Forest Service, and the Bureau of Land Management, among other agencies, giving it a monopoly but little motivation to provide better descriptions or features like user comments.

So last year, Hipcamp partnered with the Sierra Club, REI, and more than 50 other companies and nonprofits to pressure the government to open Recreation.gov to third-party booking. The campaign was a success: within two years, Recreation.gov will allow access to Hipcamp and other apps, and we'll be able to say farewell to clumsy government booking.

Hipcamp is also creating a national network of campsites on private land. All too often, campgrounds owned by companies like KOA are grim roadside dirt patches packed with RVs. Hipcamp aims to change that, turning underutilized properties—farms, ranches, even big backyards—into campsites by allowing owners to use its platform to rent them out. There aren't many available yet, and they're mostly in California, but the company is aggressively scouting for openings and offering a $500 bonus to new hosts and anyone who refers one. Meanwhile, campsite info has broken out of the Stone Age. Had Hipcamp existed before Ravasio's trip to Big Sur three years ago, she could have seen one commenter's tip: "Make sure to bring your surfboard." —DAVID MACNEAL

(THREE)

Adventure beta is better than ever.

Ask a rock climber about his favorite crag and odds are he'll direct you to its Mountain Project page. The online guide, run by a company called **Adventure Projects**, is the biggest name in climbing beta—three million users have contributed detailed, up-to-date information for more than 130,000 routes across the globe, from annotated photos of sport walls to guides to 31-pitch routes in Yosemite.

The site was cofounded in 2005 by Boulder, Colorado, climber Nick Wilder, 43, to harness the recent explosion in climbing info online. But he didn't stop there. Wilder began turning Adventure Projects into an all-purpose outdoor resource when he launched MTB Project in 2013. The site gives mountain bikers the same kinds of information that climbers have come to rely on, and in two years it has grown to half the size of its sister site, with 51,000 miles of user-added trails in its database. In April 2015, Adventure Projects added Hiking Project, Trail Running Project, and Powder Project (for backcountry skiing).

The reach and depth of information on these sites attracted the attention of REI, and in May Adventure Projects was acquired by the retail behemoth. "The sale gave us this opportunity to forget about selling ads and focus on building great products," Wilder says. These will include smartphone hiking guides to national parks, in conjunction with the National Parks Centennial in 2016. The guides will offer descriptions and ability level for every single trail, and like the company's other products, they'll work offline, so you won't need a cell signal or Wi-Fi.

Some users think there's a downside to Adventure Projects' expansion. Don Morris, a Denver-based Mountain Project user since 2007 who has made more than 400 contributions to the site, said he wasn't interested when he got an e-mail invite to Powder Project. "It totally doesn't make sense to say, 'Here's a great place to backcountry ski,'" he said. "Once I've published that, I go out there for my day and it'll be trashed."

Wilder doesn't see it that way. "I use the sites and find all kinds of great trails and go places that I wouldn't otherwise. I believe in sharing this stuff." —BRYAN ROGALA

(TWO)

New companies let you use your neighbor's gear shed or borrow their stuff.

SOME MAKE MORE SENSE THAN OTHERS



JACK RICHMOND; PASCAL SHIRLEY/GALLERY STOCK

(FOUR)

Your next guide could be a badass.

New, small guiding outfits are making their mark with extremely overqualified employees.

ESCAPE AND EXPLORE
This two-year-old South African operator specializes in urban thrills in and around Cape Town and pioneering trips throughout the continent, from SUPing Botswana's Okavango Delta to hiking South Africa's undiscovered Wild Coast. Its guides' résumés include competing in the Mountain Bike Marathon World Championships and summiting Kilimanjaro barefoot. **Book This:** Nine-time South African women's surf champ Nikita Robb leads excursions out to the remote Maputaland Marine Reserve to access empty waves near Zulu villages. From $4,900 for eight days; escape explore.com

IRWIN GUIDES
Two Crested Butte, Colorado, companies joined forces in December 2013 to offer year-round adventures, like mountaineering in Bolivia and backcountry splitboarding in Japan. Its guides are experts, like former North American ski-mountaineering champion Jeff Banks, but also down-to-earth enough that you'll look forward to sharing a drink with them around the fire. **Book This:** Big-mountain skier Donny Roth has appeared in critically acclaimed ski porn like *Solitaire* and *Valhalla*. He'll take you to the powder promised land during Irwin's five-day backcountry camp in Crested Butte. From $775; irwinguides.com

EPIC EUROPE
A luxury outfitter focused on alpine adventures in Switzerland, the company is run by a former Rossignol-sponsored freeskier and a Teton Gravity Research movie producer. As the pedigree might suggest, Epic Europe offers outings more adventurous than the staid competition, like untracked powder-day face shots and Matterhorn summits. **Book This:** Ride Switzerland's Rhone Valley with born-and-raised local Nancy Pellissier. The former pro skier is no slouch on a mountain bike and will show you the best singletrack in Zermatt and Verbier, with detours for wine and to villages otherwise accessible only by cable car. From $5,000; epic europe.com —JEN MURPHY



FROM TOP: BRIAN DOBEN/GALLERY STOCK; JARED MCMILLEN/GALLERY STOCK



(FIVE)

You can vacation with a stranger's car.

There was a time when it may have felt strange to crash in a stranger's apartment on a trip. But with the help of a slick, easy-to-use website, Airbnb made staying in a random person's house a normal way to travel. Now **RelayRides** is doing the same thing with car rentals.

The affordable options at most traditional rental companies are exceptionally boring. A beige Chevrolet Cruze is fine if you're attending an insurance-adjusters conference in Des Moines, but what if you're hauling camping gear to the end of a dirt road, say, or surfboards to the beach?

For more adventurous travel, the appeal of RelayRides becomes obvious with a quick scan through the listings. Flying into Denver for a ski weekend? There's a four-door Tacoma with snow tires, ski rack, and luggage pod available for $83 per day. Go native in L.A. with a Porsche convertible ($50), or play like a billionaire coding genius in the Bay Area, where there's a whole fleet of Teslas for rent (starting at $179).

What's the motivation for owners to loan out their wheels? Some cars often sit unused; the company offers a way to put them to good use, and owners keep 75 percent of whatever they charge. Renters handle gas, and the company's insurance covers the vehicle while it's checked out.

The RelayRides website does everything it can to make the rental experience seamless, but the reality is that you're making a deal with another person. Car owners might have ground rules; airport pickup could mean a detour to drop off the car's owner. Those sorts of logistics could be deal breakers for travelers used to walking right up to a rental counter and hitting the road. But the company has seen revenue quadruple over the past year and has raised more than $53 million in investments from Google Ventures and other venture-capital firms. And a lack of concierges and continental breakfasts hasn't stopped Airbnb. —CHRIS COHEN

(SIX)

Digital tools are now so good, you won't miss guidebooks.

STRAVA LOCAL
The social-fitness app now offers city guides featuring classic routes and the best stops.

14ERS
This hyper-detailed site devoted to Colorado's highest peaks makes for oddly compelling reading.

WAZE
The definitive road-tripping app, with up-to-the-minute info about traffic and speed traps from fellow users. —C.C.

(SEVEN)

Getting on and off airplanes could soon go much faster.

WE BREAK DOWN THREE PROPOSALS FOR BETTER BOARDING—AND TELL YOU WHO'S DOING IT BEST —*MATT BELL*

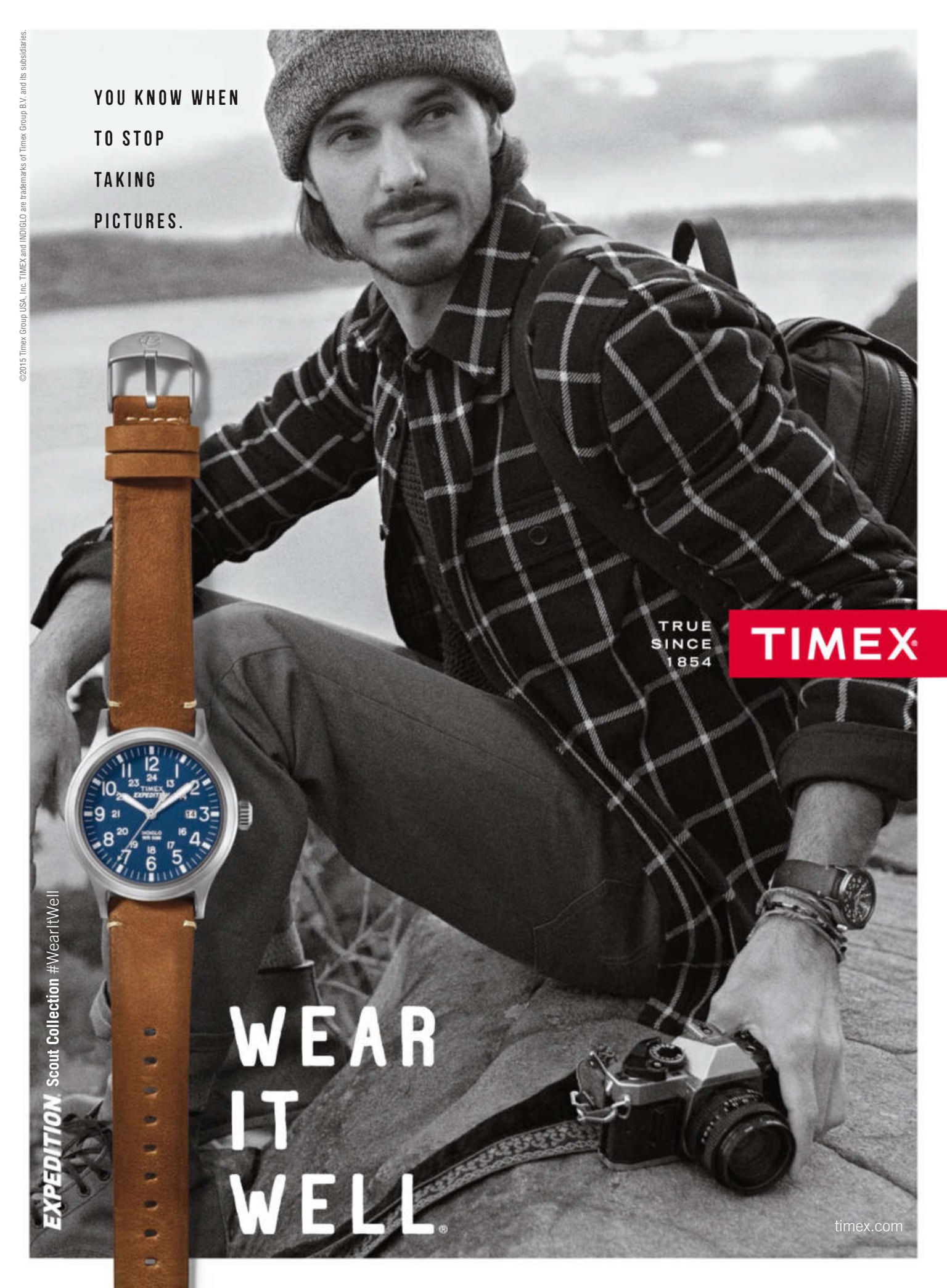
DO THE MATH
A scientist named Jason Steffen calculated the fastest boarding method: From back to front, fill every other row's window seat on one side of the plane, then the other. Repeat on the skipped rows. Board the middle seats and the aisles the same way. In tests, boarding went twice as fast. **Odds of Adoption:** It could work! It doesn't require new airport infrastructure or planes. It's not practical with families and late arrivals in the mix, but Dutch carrier KLM is working on a similar scheme.

BUILD FATTER PLANES
A German design firm devised an aircraft that's wider in the middle, to accommodate double doors and an aisle broad enough for people to pass each other. The firm claims that boarding could be accomplished in ten minutes. **Odds of Adoption:** When pigs fly. The big door weakens the structure, and the fat middle isn't great for aerodynamics. Still, plane manufacturer Airbus purchased the patent.

THE CARRIER THAT GETS IT RIGHT
Boarding is more civil with fewer passengers stashing carry-ons in the overhead bins, and it's noticeably quicker on airlines with free luggage check. While bag fees raked in $3.5 billion last year, it costs airlines $30 for every minute a plane sits at the gate, so better efficiency could boost both profits and customer happiness. **Southwest** doesn't charge for bags, and its open seating by boarding group is the most efficient method currently in use. Meanwhile, the carrier is consistently profitable and ranks high on customer-satisfaction surveys. —C.C.

USE BOTH DOORS
Planes have an entrance at the back, too. Using it would help immensely. **Odds of Adoption:** European carriers like EasyJet already do this, by positioning staircases on the tarmac. Most U.S. airports use jet bridges that go only to the front door. Alaska Airlines has experimented with front and back bridges in San Jose and Seattle; they typically save ten minutes. Adding them to every airport would be costly but not impossible.

Illustration by KATE FRANCIS



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One huge canyon, lots of ways to see it

Life Is Grand

AUTUMN, WHEN TEMPERATURES FALL AND THE TOURIST HORDES GO HOME, IS THE PERFECT TIME TO HEAD TO THE GRAND CANYON. WHETHER YOU HAVE A WEEKEND OR A MONTH, WE'VE GOT OPTIONS.

CAR CAMP

You don't have to take all your vacation days to have a good adventure. For starters, you get a pretty damn good view of the canyon's majesty from the National Park Service village along the South Rim. Skip the tourist vibe at El Tovar and the Bright Angel Lodge in favor of one of the campgrounds along the entrance road. The best is Mather, located within walking distance of the canyon and a general store (good for last-minute s'mores supply runs). Even on a busy Memorial Day weekend, you can ditch the bused-in gawkers at this quiet, wooded site. Rising early the next day is key: hit the Bright Angel Trail at 6 A.M. to avoid crowds and you'll be in the clear three miles down. Bring a picnic—the food in the village is pricey, but provisions are available just outside the park in Tusayan, Arizona—and enjoy it at Indian Gardens, an oasis about five miles down the trail. From here, go another five miles to the Colorado River for an all-day trek, or head back up to your camp for those s'mores. —AXIE NAVAS

GO FAST

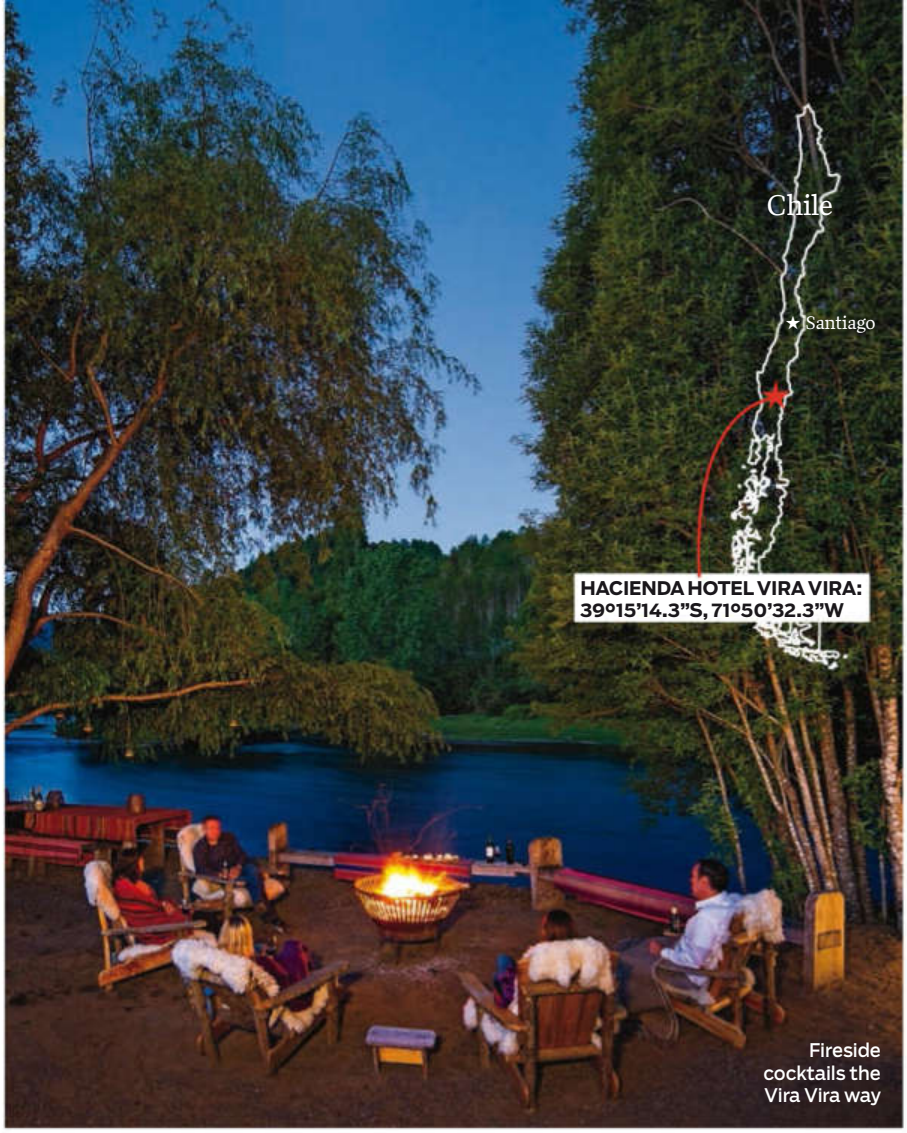
A trail run is the quickest way to take in the entire canyon. The bucket-list route is Rim-to-Rim-to-Rim (R2R2R, for those in the know), a punishing 42 miles up and down both sides. But R2R2R has its downsides. It's a long day, even if you're gunning for the record. (Ultrarunner Rob Krar did it in a little over six hours.) It also requires careful planning. Start after 5 A.M. and you'll get stuck behind mule trains. Go too early or late in the year and you risk not having water for most of your trip; the North Rim water station is turned off from mid-October to May. Still, it can be worth it to see the entire canyon in one go. There's also a mellower 24-mile South Rim option: start at Hermit's Rest and run parallel to the river to Bright Angel. You'll weave through clover-shaped canyons with stellar views of some of the best rapids, and you probably won't see another soul until you hit Indian Gardens. From there it's five miles to the finish—celebrate with ice cream at the Bright Angel Lodge. —MEAGHEN BROWN

GET WET

The only way to say you've actually done the Grand is to raft it. The second-best float is with a commercial outfitter. We like OARS's 13-day wooden-dory trip from Lees Ferry to Whitmore Wash ($5,179; oars.com). You'll hit the biggest rapids of the inner gorge and many of the most famous side hikes and cultural sites. Then, just as the rapids start to peter out, helicopter out to Bar-10 Ranch, no sweltering van ride required. Yeah, helicopter shuttles suck, but not as much as the development, jet boats, and dam sediment in the canyon's lower 30 miles. The only better trip is to round up 15 friends and put in for a 25-day private permit in the Park Service's weighted lottery—surprisingly easy to win if you coordinate entries and target the off-months (nps.gov/grca). Then quit your job, call that college buddy who worked as a raft guide, and hire Canyon Reo to fully outfit you with gear and food (from $1,000; canyonreo.com). Order twice as much beer as you think you'll need. —GRAYSON SCHAFFER

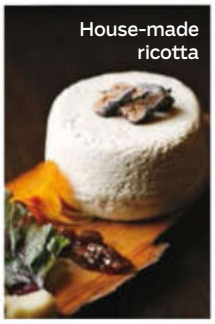
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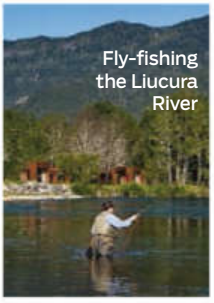
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Borrow a mountain bike from the lodge for a 20-mile ride through Villarrica National Park to soak in the 106-degree Geometricas hot springs.

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This is red-meat country. Tackle an enormous slab of beef like a real *huaso*—a Chilean cowboy—at La Maga in town.

Volcanic Hot Spot

SPRING IN SOUTH AMERICA MEANS SNOW, WHITE-WATER, AND ADVENTURE EVERYWHERE YOU LOOK

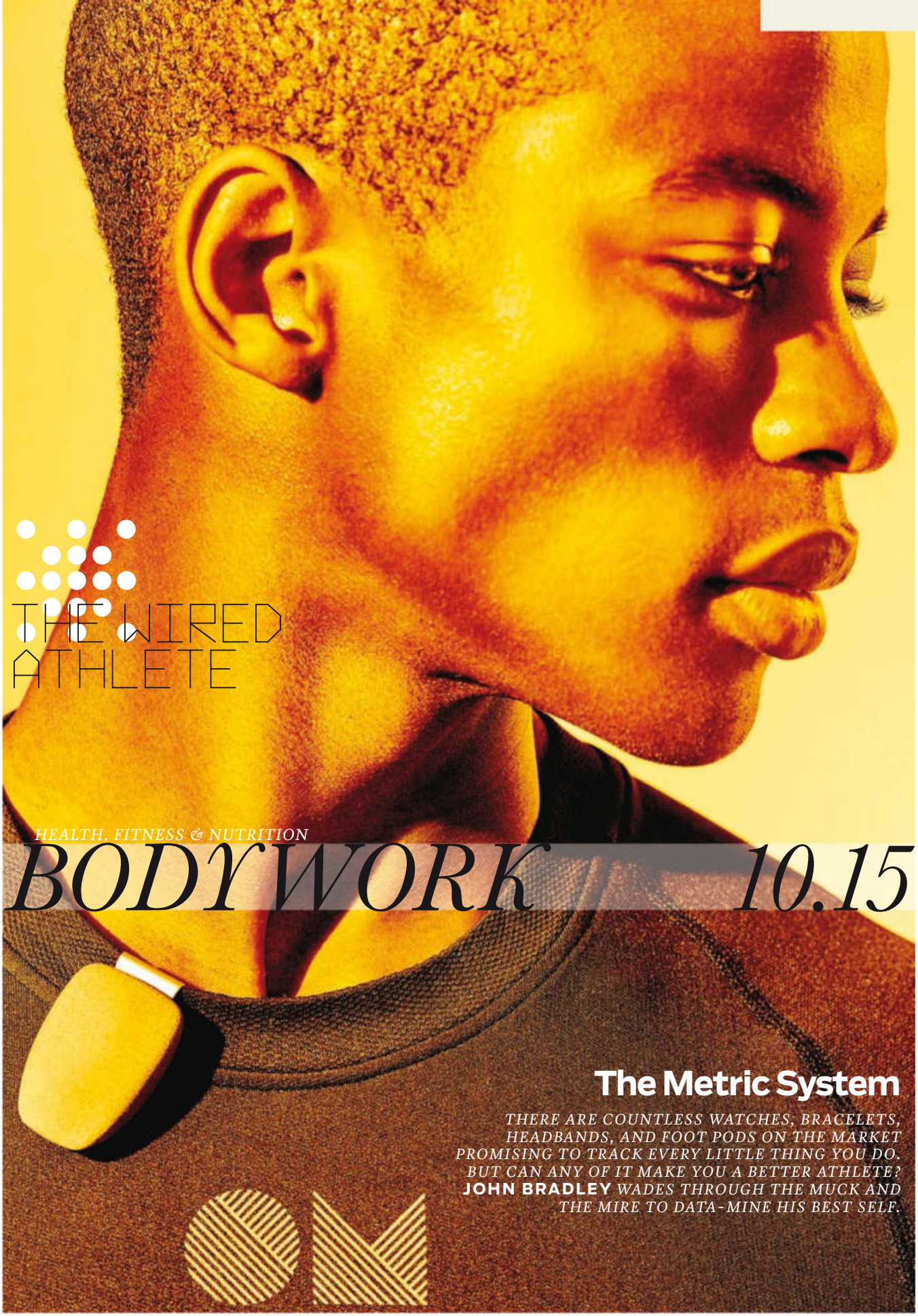
by Abe Streep

PUCÓN, A TOWN OF about 22,000 situated halfway down Chile's spine, is the Southern Hemisphere's Jackson, Wyoming. It's perched in the mountains and offers endless outdoor options. The key difference: Pucón is surrounded by a group of active volcanoes, the most famous of which is 9,341-foot Villarica, a popular destination for trekking and backcountry skiing that blew its top last March. The eruption momentarily scared off travelers; that, combined with the arrival of shoulder season, makes this the perfect time to head south. Stay at Hacienda Hotel Vira Vira, a sprawling adventure resort on the banks of the Liucura River. The place was opened by former Swiss banker Michael Paravicini in 2014, when he and his wife decided to switch continents and start over. His first step was to buy riverfront property (smart); his second was to hire head guide Edgardo Songer, who spent 18 years leading trips for the iconic Explora Resorts (smarter). Once you arrive, you'll have your pick of adventures—especially in the Chilean spring, from September to November, when there's snow up high and roaring water below. Want to work your thighs? There's a 12,393-foot volcano to climb up and ski down. Want to catch fish? Pluck a fat brown trout from the Liucura, out the hotel's back door. Want more adrenaline? Take a raft down the raging lower Trancura River, where, says Paravicini, "the chance you will fall off the boat is really high." Want to keep it mellow? The hotel operates its own organic farm; help out with the day's chores for the full farm-to-table experience. Whether you pitch in or not, you will be treated to multicourse meals sourced from the property, served with Chile's justly renowned red wines.

COURTESY OF HACIENDA HOTEL VIRA VIRA (7)

GOODYEAR


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THERE ARE COUNTLESS WATCHES, BRACELETS, HEADBANDS, AND FOOT PODS ON THE MARKET PROMISING TO TRACK EVERY LITTLE THING YOU DO. BUT CAN ANY OF IT MAKE YOU A BETTER ATHLETE? **JOHN BRADLEY** *WADES THROUGH THE MUCK AND THE MIRE TO DATA-MINE HIS BEST SELF.*

Photographs by JILL GREENBERG











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RUNNING WILD AND RUNNING FREE

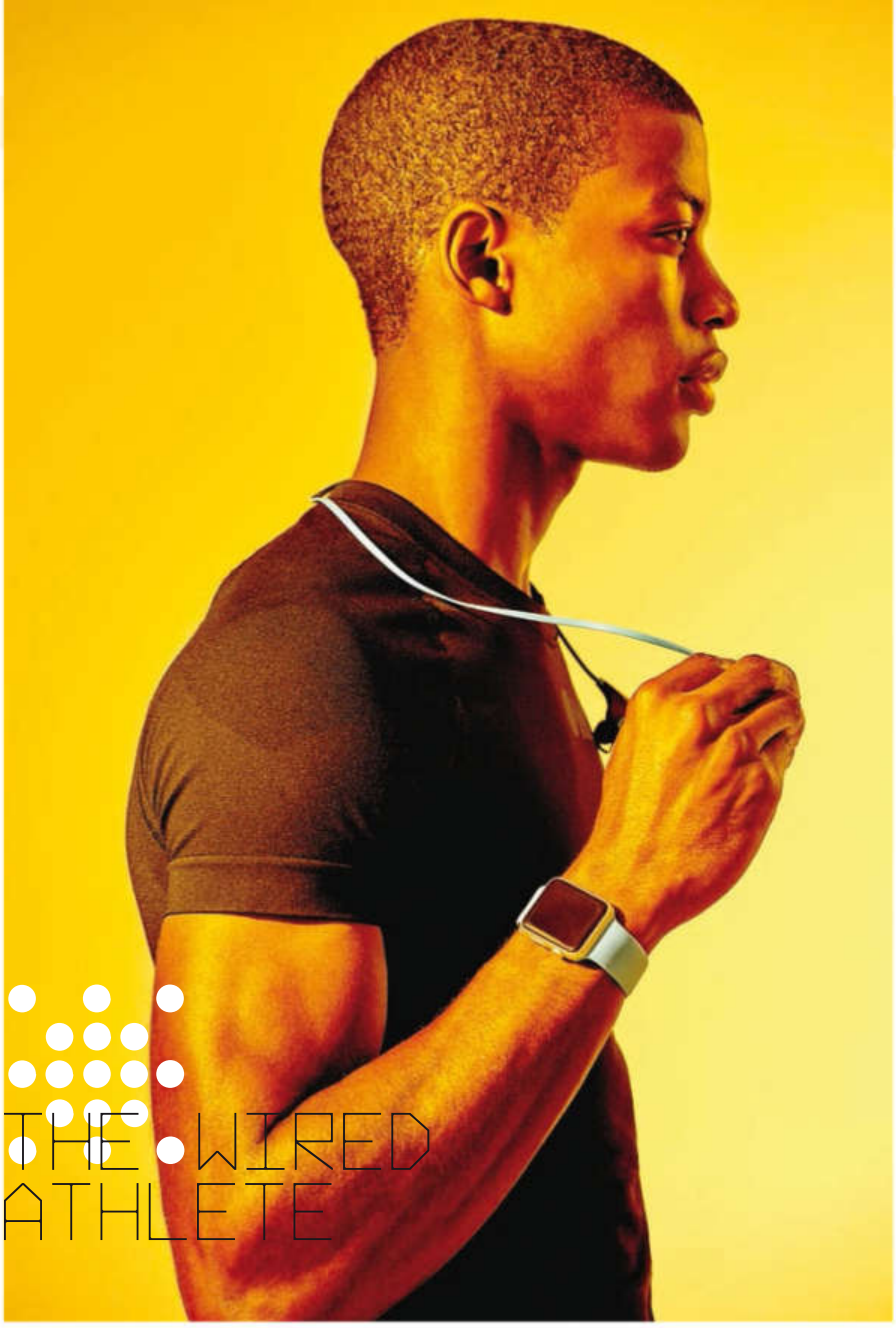
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1) EPA est. 24 City/31 HWY based on all 1.4L 4-cyl models. Front wheel drive models equipped with 2.4L 4-cyl have a EPA est. 22 City/31 HWY. 4x4 models equipped with 2.4L 4-cyl have a EPA est. 21 City/29 HWY. Actual mileage may vary. Jeep is a registered trademark of FCA US LLC.



THE WIRED ATHLETE

AFTER TWO MONTHS testing 16 different fitness trackers, I'm sitting on the sofa watching *Game of Thrones,* jiggling my wrist to push the step count on my Garmin Forerunner smartwatch to the 20,000 mark.

I am a shallow, petty man.

A local 10K in the morning, some yard work in the afternoon, and the constant motion that comes with being the father of an infant brought me to 19,841. Even though I've already determined step counts to be a pointless metric for athletes, I'm too obsessive-compulsive to just leave it at that. Yet, walking around the block to reach a specific count of an imprecise measure of an activity I don't even care about seems *less* honest than just lying to the Garmin. Better to deceive the watch than myself. So I sit there waving my arm back and forth while Jon Snow strikes an uneasy alliance with the Wildling leader.

It's no secret that fitness trackers are a mess of a success story. Manufacturers shipped 9.7 million of them in 2013, a number expected to hit 135 million by 2018. The proliferation of wearables was supposed to change our lives. We'd run faster and sleep better, get injured less and lose weight. The problem, of course, is that change is hard. While wearables have undoubtedly helped spur millions of people to be more active, the effect for many can be temporary. Indeed, a report last year from consulting firm Endeavour Partners found that more than half of the people who buy fitness trackers eventually stop using them. A third do so within six months.

"What's the common experience for individuals? They get a fitness tracker, and it sparks them to start walking," says John Bartholomew, a professor of health education at the University of Texas at Austin, who specializes in exercise psychology. "So they walk three miles in the morning, and that gets them 4,000 steps. Over the course of a day, maybe they get another 3,000 and do an extra walk to get to 10,000. After a couple of weeks it's, 'I do my walk in the morning, and then I go about my day and I hit my goal.' The novelty of the information is removed. The step count is no longer useful. And that's why people set these devices down."

But that's a sweeping generalization, data averaged out across the masses. Move a couple of standard deviations away from the center of the bell curve—out toward the motivated fitness junkies who wake up at 5 A.M. for pre-office workouts—and things look different. I started using a bike computer to track speed and mileage 25 years ago and have been getting real-time performance data like power and heart rate for more than a decade. As both an athlete and a tech journalist, I wanted to know how wearables were evolving for more specialized users: those of us accustomed to, say, comparing steady-state power output on Strava. The masses can have—and abandon—their Jawbone Ups. What's out there for us?

I spent months working my way through fitness trackers built into watches, bracelets, belt clips, apparel, and jewelry. (See "The Audition," page 58.) I didn't start a new training routine or pick up any new sports; I didn't change my bedtime or set weight goals. I incorporated these gadgets into my life, not vice versa, and then watched what happened. Eventually, I settled on a few

If You Want to Get Faster...

TRACK: YOUR HEART-RATE VARIABILITY.
The most common way to plateau is to train at 80 percent all the time. Instead, make your hard workouts really hard, then recover properly. You'll know you've gotten adequate rest when the time between heartbeats fluctuates. That's called high heart-rate variability, and it means you're ready for another intense outing. If your heartbeats are more regular, that's low variability, and you should take a day off. Check and record HRV first thing when you wake up.
TOOL: A Bluetooth heart-rate monitor like Wahoo's Tickr X ($100; wahoofitness.com), which can sync with a number of smartphone apps. Our favorite is the simple and intuitive Elite HRV (free; Android and iOS).

that made me not just a fitter athlete but also a more effective worker and a better husband and father.

And I have the data to back that up.

THE CLASSIC FEEDBACK loop for behavior change is: act, measure, learn, modify. If you've ever housebroken a dog you've done this, and you know how important it is to provide feedback immediately following an action if change is going to happen. You also know that there's no point in continuing to offer it once Biscuit has learned to do her business outside.

For activity trackers to spur change, they need to be part of an effective feedback loop, and they need to continue offering novel information. Data telling you what you performed—a workout or a certain number of steps—is not novel. Data telling you *how* you performed—speed, heart rate, power—is. A lot of wearables, including most step counters and sleep trackers, fulfill only the measure step. As a study in the *Journal of the American Medical Association* noted earlier this year, "The gap between recording information and changing behavior is substantial ... and while these devices are increasing in popularity, little evidence suggests that they are bridging that gap."

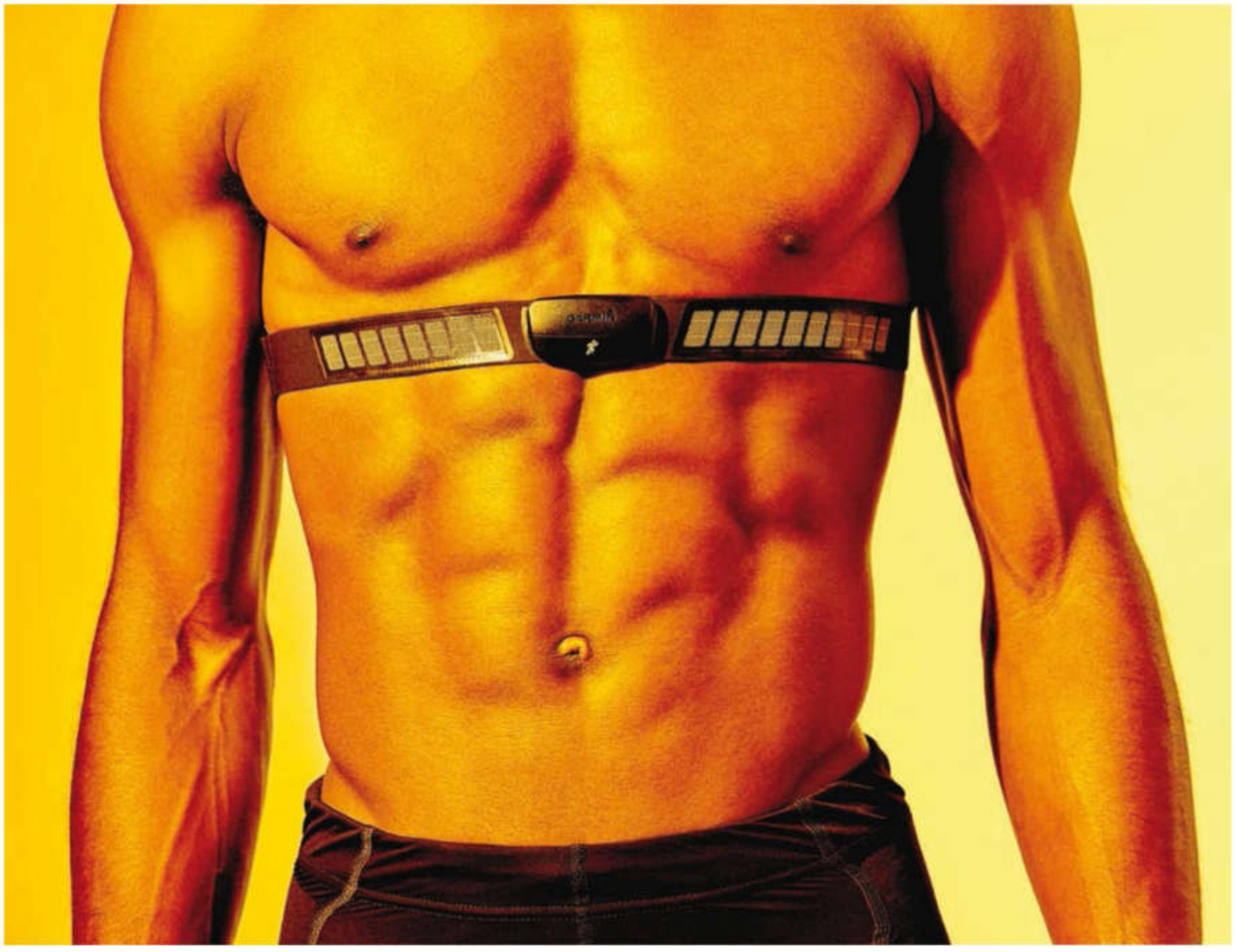
Critics of fitness trackers—and there are many—fault them for not operating more like medical devices. They want their wrist straps to give them their resting heart rate and also tell them that their LDL cholesterol is too high and to prescribe statins and a meal plan. In March, *Wired* ran a story titled "Fitness Trackers Won't Really Help Until They Tell Us What to Do." It argued that fitness trackers mainly measure problems without offering solutions.

Here's the thing: in a lot of cases, the problem isn't that fitness trackers don't offer advice; it's that they're actually prohibited from doing so.

The FDA defines a medical device as a product that is "intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment, or prevention of disease or is intended to affect the structure or function of the body." These devices are subject to onerous regulations and approval processes. Given our understanding about the roles that exercise and healthy lifestyles play in disease prevention, apps and wearables designed to measure and promote exercise butt right up against those regulations.

Earlier this year, the FDA issued new guidelines meant to help clarify things. While apps and products that help people record workouts or make decisions about health and wellness could meet the definition of a medical device, the FDA says it will "exercise enforcement discretion," meaning they're mostly cool—for now. But the agency says it will look much more closely at products that use "built-in features such as light, vibrations, camera, or other similar sources to perform medical device functions."

In other words, as soon as a company starts pulling data from a sophisticated piece



of hardware that reads physiological markers like blood pressure and oxygen levels, regulators might get involved. That means engineers are doing far less with wearables than they could be.

"We know there's a lot more potential," says Alex Frommeyer, founder of Beam Brush, an electric toothbrush that pairs with an app to measure and promote dental hygiene (and is regulated as a medical device). "If the regulatory environment was completely different in how you could look at the prescriptive and diagnostic side of the world, we could have considered investing more deeply in those technologies."

For now, the available fitness trackers can measure and nudge, and that's about it. But if you're already motivated, that's plenty, especially if the data you're recording remains novel and engaging.

"From an athlete's perspective, you are somewhat variable in terms of both your workouts and how you respond to them," Bartholomew says. "Your heart rate's not always going to be the same, for example. Tracking for athletes continues to give interesting information in a way that tracking for the general population does not."



THE WIRED ATHLETE

MOMENTS AFTER I set out for a seven-mile evening run, a woman's voice, calm and Siri-like, interrupts the Japandroids song blasting in my Jaybird headphones: "You are averaging 156 steps per minute. You should be averaging at least 162." Over the next hour, she'll continue to check in with cadence numbers as well as mile splits and reminders to keep my back straight and to strike the ground with good form. "Try shortening your stride," she suggests.

The voice is from my Moov Run and Walk app. The company, which launched last year on Kickstarter, also has free apps for cycling, swimming, and the gym. The 1.5-inch puck strapped to my right ankle, which pairs with all the Moov apps, collects data on cadence, range of motion, stride length, and impact. Once I end my workout, I can view all this in the app's graphical report, with a table of my splits and with charts showing metrics for performance and form down to degrees in my range of motion and the G-forces of my foot strikes. The Garmin Forerunner 920 XT watch on my wrist does the same stuff, but the Moov's in-ear reminders have me hooked. The 920 is there for post-workout analysis and trends—something Garmin presents better than any other company in this space.

In the swimming pool, the two devices switch roles. The 920, with its huge display and broad capabilities around timed intervals and customized workouts, provides in-the-moment feedback. The Moov sits quietly on my opposite wrist until I get back within range of the Swim app running on my iPhone. It grabs the data from the puck and gives me an in-depth look at my workout, not just total distance and times for every lap, but also time and distance per stroke, fastest splits, and longest uninterrupted swim.

Crucially, Moov also explains what the numbers mean and what I should be shooting for. My 2.26 seconds per stroke is well off the 1.5 to 1.7 seconds that the app says strong distance swimmers average. So I start focusing on my arm turnover. Within three weeks, I'm down to 2.12 seconds and I'm getting a bit more distance with each stroke. I am objectively a better swimmer.

These devices are measuring the same things myriad other trackers do—motion, distance, speed. At this point in our technological history, the trick isn't gathering metrics; it's presenting them. Garmin and Moov package tens of thousands of data points in a way that's both understandable and addictive. Proof? Moov says greater than 75 percent of those who bought the device are still using it more than a year in.

"Intrinsic motivation is based on enjoy-

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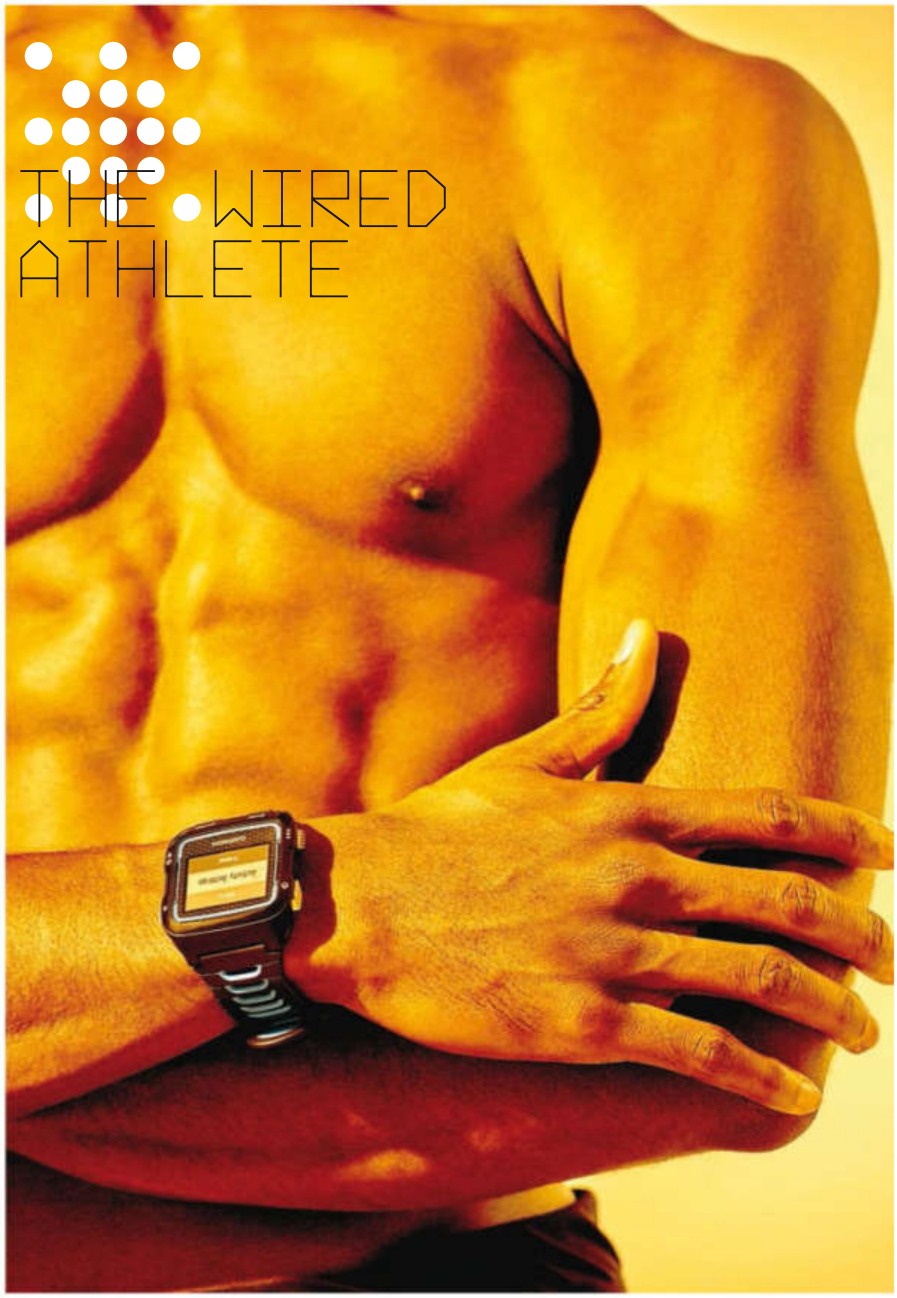
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ment," Bartholomew says. "Learning about yourself and testing yourself and demonstrating competence are inherently enjoyable. So from an intrinsic-motivation perspective, you need to keep learning. As long as you're getting useful information, you'll continue to track."

And some companies are finally delivering on that promise.



MOOV AND GARMIN are the pinnacle of this first wave of fitness trackers. The next generation is something else entirely. The tech startup Athos has come out with compression shirts and shorts embedded with sensors that provide feedback that even the best personal trainers can't match.

The garments send the data to a smartphone app that displays it as a real-time heat map on an anatomical diagram. Set your phone in front of the squat rack and you can see how well you're using the target muscles, if you're engaging them with the right intensity, and where you have imbalances.

At Unbreakable Performance in Los Angeles—a gym with numerous pro-athlete clients, including about 30 NFL players—trainers use Athos to gauge users' initial form and guide their workouts. "I get to see which muscles are firing and in what order," says trainer Gabe Rangel. "If I see that the left hamstring is firing and the right isn't, I know something's wrong. If we're doing sprints and I don't see glutes firing, I know they're not getting full extension."

As I push my way through a heavy set of squats, the eight sensors on the shorts immediately pick up on the weakness in my left hip that a physical therapist diagnosed a couple of years ago. The heat map shows left and right firing at different times and intensities. I press a button on the screen after my set and the app displays muscle-effort data for my glutes, hamstrings, and inner and outer quads. All the numbers are lower for my left side, save for the inner quad, which was doing almost 50 percent more work than my right inner quad, presumably to compensate for the imbalance.

For my next set, I reduce the weight and watch, in real time, as my focus on form slightly evens things out: another smart feedback loop leading to real change; no need for a visit to my PT.

The Athos app can also play back entire workouts, which is helpful for things like running and cycling.

Still, as much as I appreciate what Athos offers, I use it only once a week or so, to check in on my form. Even the 920 and Moov come out only when it's time to train. After exhaustive testing, the only tracker I wear daily has nothing to do with athletic performance at all. At least on the surface. It's called Spire, and it was based on research at Stanford University. It clips inside the waistband of my pants and monitors the rise and fall of my abdomen to record breathing patterns.

Spire uses this data to gauge whether I'm stressed, focused, or relaxed—states that

If You Want to Dial In Your Running Form...

TRACK: YOUR VERTICAL OSCILLATION AND GROUND-CONTACT TIME.
Fast runners take quick steps forward, not up, turning energy into motion more efficiently than midpackers. Ground-contact time refers to how long your feet touch the pavement, and vertical oscillation is the distance you bounce up and down with each stride; a lower number is better for each.

TOOL: The Garmin Forerunner 620 watch ($350; garmin.com). It tracks both of these metrics, and a digital gauge changes color when your form is slipping.

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For decades, skiers, riders, alpinists, conservationists, and First Nations have fought a large-scale ski resort deep in the Purcell Mountains of British Columbia. After 24 years of opposition, what more will it take to keep Jumbo wild for good?



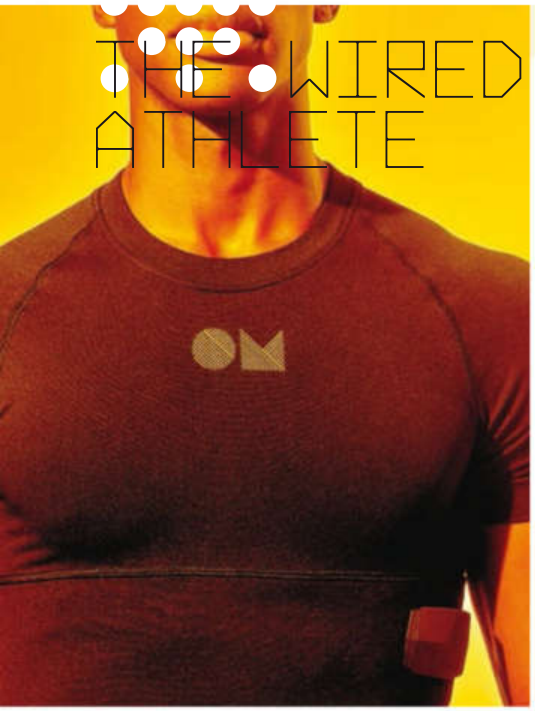
Jumbo Wild

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it displays on a smartphone app. I can set goals—three hours of focus per day, two hours relaxed—and the app shows progress on an elegant clover-shaped graph. Customized alarms notify me when I've been tense for five minutes or after a calm streak of at least three minutes has ended.

Additionally, once every day or two, I plug in my headphones and choose a Calm, Focus, Energize, or Meditate session. The app then walks me through a few minutes of breathing exercises geared toward putting myself in those states. As I follow the commands for inhales and exhales, I can watch the oscillating line on my screen—my breathing pattern—become deeper and more rhythmic.

"This is one of the few actionable things you can do," says Spire cofounder and CEO Jonathan Palley. "You can't really consciously change heart rate. What you can do, though, is take a few relaxing breaths. A long exhale isn't something you do when you're in danger. It triggers your mind to think, OK, if I have time to slowly breathe out, then nothing is going to attack me right now."

Being relaxed has a tangible effect on your performance. Athletes with high stress levels are more likely to get sick or injured. In 2012, Bartholomew and a co-researcher at the Yale Stress Center found that stress hinders recovery after a hard workout. They recommend that "athletes and others undergoing bouts of strenuous exercise should undertake strategies to obviate the negative effects of chronic mental stress."

Spire can tell you you're stressed before you're even aware of it yourself. "Eighty-four percent of the time," Palley says, "when Spire surfaces that someone is becoming

The Audition

HERE ARE THE 16 WEARABLE DEVICES WE LOOKED AT—AND WHO IS BEST SERVED BY EACH

FOR CASUAL ENTHUSIASTS

Apple Watch Sport $350 and up
THE GOOD: Integrates seamlessly with the iPhone's communication functions; early-adopter street cred.
THE BAD: Quick-draining battery; limited sports tracking. apple.com

Basis Peak $200
THE GOOD: Combines features like e-mail and phone calls with sleep and activity tracking.
THE BAD: No GPS; black-and-white screen. mybasis.com

Fitbit Charge HR $150
THE GOOD: Adds heart-rate monitoring to Fitbit's category-leading activity monitoring.
THE BAD: No GPS, so no Strava glory. fitbit.com

Garmin Vivo-Active $250
THE GOOD: Built-in features for specific sports, including golf.
THE BAD: Do you really need a watch that tracks your handicap? garmin.com

Garmin Vivofit 2 $100
THE GOOD: Can go a year without a charge.
THE BAD: Limited to basic activity-monitoring features. garmin.com

Lumo Lift $80
THE GOOD: Wearable posture coach.
THE BAD: Does what it says, but who wants to be nagged about posture? lumobodytech.com

FOR WEEKEND WARRIORS

Fitbit Surge $250
THE GOOD: Combines the features of an always-on fitness tracker with GPS and heart rate for logging workouts.
THE BAD: Like all wrist-based heart-rate monitors, it can be inaccurate during workouts. fitbit.com

Moov Now $100
THE GOOD: Hyper-detailed form analysis; affordable.
THE BAD: Limited to accelerometer tech (i.e., no GPS or heart-rate monitor). welcome.moov.cc

Polar M400 $230
THE GOOD: Combines activity monitoring, heart rate, and GPS tracking; cheaper than the competition.
THE BAD: Lacks features like recovery and form analysis. polar.com

TomTom Runner Cardio $230
THE GOOD: Simple to use; built-in heart-rate monitor.
THE BAD: No ANT+ connectivity limits accessory choices. tomtom.com

Wahoo Tickr X $100
THE GOOD: Integrates sports tracking into a chest strap; watch not required.
THE BAD: No screen means there's no way to follow workouts in real time. wahoofitness.com

FOR ASPIRING PROS

Athos $150 and up
THE GOOD: Sensors embedded in clothing provide an exhaustive look at how your body is working.
THE BAD: You're locked into wearing their workout duds. liveathos.com

Garmin Forerunner 920XT $450
THE GOOD: Aimed at triathletes, it syncs with cycling power meters and analyzes swimming form.
THE BAD: No touchscreen. garmin.com

Garmin Vector 2 pedals $1,500
THE GOOD: Track power without limiting wheel or crank choice; can break numbers down by left and right leg.
THE BAD: No MTB version. Cost more than a month's rent. garmin.com

Recon Jet sunglasses $700
THE GOOD: Displays data like power and heart rate in a convenient, always-visible spot.
THE BAD: It looks like Google Glass's meathead older brother. reconinstruments.com

Spire $150
THE GOOD: The rare wearable that tells you what to do with all the information.
THE BAD: Being told you're stressed when you already know you're stressed is somewhat, uh, stressful. spire.io



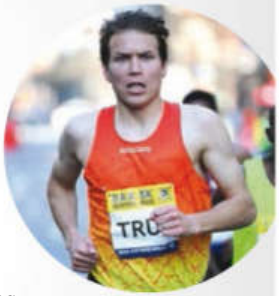
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FOR THE CROSS-COUNTRY CROSSOVER STAR **BEN TRUE,** WHO TOOK SECOND AT THE U.S. CHAMPIONSHIPS 5K IN JUNE, RUNNING IS A NATURAL HIGH.



I grew up in Maine, so I wanted to be a hockey player. When I was in second grade, my dad was training to qualify for Boston, and it seemed like something cool to do, so I joined the local kids program. It was mostly just playing running games, like sharks and minnows, but there were also races and I caught the competitive bug.

In college, I burned out. After achieving my biggest goal—running a sub four-minute mile—I decided to take a break. I loved Nordic skiing, so I took a semester off from school, went to Idaho, and joined a professional ski club.

It was my first time at altitude, and I got a little overtrained. I was a walking zombie. My coach had me do 15-minute jogs every day, just to get the blood flow moving. It was then that I realized I missed running. That it was something I really loved.

Once I walked away from the sport and stripped myself of all pressure, I realized how much I love going for a run alone, seeing how hard I far I can push myself. And there's no greater feeling than putting yourself into a race and, knowing all the work and effort you put in over the years, and crossing the line first. You're always chasing that feeling.

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stressed, the user's breathing pattern will change within 90 seconds." Another feedback loop in action.

Contrary to criticism that mobile technology takes users out of the moment, Spire has taught me to be more connected—to listen to my breathing for a sense of how I'm reacting to things and to use that knowledge to be more present in what I do at work, at home, and while training. My wife noticed enough of a change that she's getting one for herself. I'm certainly no Zen monk, but I'm better than I was.

I STARTED WITH 16 fitness trackers and worked my way down to four. That means I abandoned 75 percent of the ones I tested, all within just a few weeks. That's an awful return. But the four I didn't discard have become part of my regular routine—one that is now healthier and more productive. So is this product category failing or succeeding?

Both. Understanding why makes all the difference.

Three key mistakes have hurt people's relationships with fitness trackers. The first is a tendency to lump them all together. An entry-level pedometer is not the same as an Apple Watch with optical heart-rate detection, and that Apple Watch is not the same as a Garmin Forerunner 920XT that can record swim workouts, analyze running form, and estimate VO_2 max. Just because a basic step tracker doesn't change things doesn't mean the entire category is without merit.

"The idea that a single wearable is for everyone is wrong," Palley says. "These are specific tools designed to help you do something better that's both very personal and very diverse."

If You Want to Destress...

TRACK: YOUR BREATHING. "Take a deep breath" verges on cliché when trying to tackle stress. But studies have shown that doing so helps get the body's natural fight-or-flight reactions under control. Deliberately controlling your breathing lowers blood pressure, eases stress-hormone production, and balances oxygen and carbon-dioxide levels in the blood.

TOOL: Spire ($150; spire.io), a minimalist tracker that clips to your waistband and measures the rise and fall of your abdomen. It pings your phone when it senses that you're too tightly wound, then guides you through breathing exercises to cool off.

Second, from the consumer perspective, the focus on hardware is misguided. People buy a tracker, then build their goals around what it can measure. The trick is to start with what you want to accomplish, determine which data best reflect it, then find the hardware and apps that deliver that data. Goals, data, technology, in that order.

The third mistake is the most important: a failure on the part of both buyers and manufacturers to understand feedback loops and the psychology of behavior change. The data must be novel and relevant, but also presented in a way that encourages and measures transformation.

"The big challenge with apps or fitness-tracker technology is that, in general terms, they're asking a huge percentage of their customers to do a new behavior," says Beam founder Frommeyer. "So the premise is, you have to wear something new, every day—a physical change to your appearance. And after you make that change, you have to adjust your behavior."

A few months ago, the Apple Watch entered this space with huge expectations. It's a watch—and an elegant one at that—so for most people it doesn't require a change in appearance. But the only attractions for me lie in the productivity features—things like texting, screening calls, and checking my schedule from my wrist. Those ultimately weren't enough to keep me coming back. (And I'm an Apple guy: iPhone, iPad, two MacBook Pros, and two Apple TVs.) In terms of fitness tracking, the Apple Watch is all steps and daily goals. Even the standalone exercise app measures workouts only in terms of time, distance, heart rate, and calories. It's a diary, not a coach.

That was the takeaway for most of the wearables I tested. Of the trackers I started with, only the Garmin, Moov, Spire, and Athos shorts have hooked me with their data while asking nothing new of me. I simply go about my workouts or my daily routines as I normally would, except with continuous opportunities to adjust and improve. It's not about hitting huge 24-hour goals built around arbitrary metrics. It's about thinking, from moment to moment, how I can train and live a bit better.

That gap the *JAMA* researchers found between recording information and changing behavior hasn't closed, but it's starting to narrow. *O*

JOHN BRADLEY (@JOHNWBRADLEY) IS A FORMER OUTSIDE *SENIOR EDITOR. CURRENTLY HE'S THE EDITOR IN CHIEF OF* VELONEWS.


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As wave after wave of African and Middle Eastern refugees launch themselves across the M



S.O.S.

Mediterranean in overcrowded boats, a young Louisiana millionaire and his Italian wife take to the sea to save them

BY JOSHUA HAMMER



A boat full of migrants, rescued on June 10 in the Mediterranean near Libya

PHOTOGRAPHS BY **MARCO DI LAURO**

Three days after boarding the 131-foot rescue vessel MV *Phoenix* in Augusta, Sicily, I was standing on the ship's top deck on a warm June dawn, watching the rotor blades of a blue-and-orange-striped Camcopter S-100 drone shudder into motion. We were a few miles southeast of the Bouri Offshore Field, a patch of deepwater oil wells and drilling platforms jointly owned by an Italian company and the Libyan government, in the heart of the Mediterranean Sea. Lit at night by natural-gas flares and heavily trafficked by naval ships, merchant vessels, and maintenance boats, the oil field has become a beacon for refugees fleeing by sea from war and poverty in sub-Saharan Africa and Syria. Last year, 219,000 of them crossed the Mediterranean in rickety fishing boats and open dinghies, a massive flotilla organized by smugglers along the coast of lawless Libya. In their desperate attempt to reach European shores, refugees have drowned by the thousands.

The *Phoenix* had arrived in the vicinity of Bouri the previous night, after a 30-hour sail from the east coast of Sicily. Now we had entered a patrolling pattern. We were waiting for either a summons to action from the Maritime Rescue Coordination Center (MRCC) in Rome, run by the Italian coast guard, or for visual contact with a refugee-filled boat by one of the *Phoenix*'s drones. Because those vessels are often unseaworthy, and the conditions aboard are so wretched, the MRCC encourages ships equipped for rescues to intercept the migrants as soon as they exit Libyan waters and transport them to southern Italy, the closest country that will accept them. There, they'll remain in detention centers while their applications for political asylum are processed.



Christopher Catrambone on the bridge of the MV *Phoenix*

"CHRISTOPHER'S PHILOSOPHY IS CARPE DIEM," SAYS REGINA. "IF YOU MONEY, WHY DO YOU NEED TO WAIT? IN THE MEANTIME, **HOW MANY**

"We consider a boat that is overcrowded to be in imminent danger," the founder of this private rescue venture, a 34-year-old American entrepreneur named Christopher Catrambone, had told me earlier. "When you have a boat that is equipped for ten fishermen and you have 400 people on board, including women and children, without life jackets, this boat needs to be rescued."

Born and raised in Lake Charles, Louisiana, the son of an oil and gas engineer, Catrambone started a war-zone insurance company, Tangiers International, that provides kidnapping, terrorism, and death and injury coverage to journalists and military contractors. Based on Malta, the Mediterranean's only English-speaking country, it had $10 million in revenues last year. In 2013, Catrambone poured $8 million of his personal fortune into creating the Migrant Offshore Aid Station (MOAS), the Malta-based NGO that deploys the *Phoenix*. He spent two months last year aboard the ship. During that time, the *Phoenix* participated in nine rescue operations and came to the aid of 3,000 migrants, carrying them to Italian ports or transferring them onto naval vessels. This spring, in its first 60 days of a six-month season, the *Phoenix* helped rescue 5,597 more people, and by August, the number had climbed to 8,696.

Catrambone, however, remained on Malta this year to run his insurance business, leaving shipboard operations in the hands of his wife and partner in the venture, 39-year-old Regina Egla Catrambone, a tireless, take-charge Italian who has thrown herself into the rescue effort. On this journey in early June, there were 23 of us aboard the refitted trawler, including a Spanish captain, Gonzalo Calderon, his six-person crew, and a three-man search and rescue team made up of former members of the Armed Forces of Malta. There were also six doctors, nurses, and logisticians from Doctors Without Borders, as well as two pilots and an engineer from the Austrian defense contractor Schiebel to operate the *Phoenix*'s two drones.

The S-100's blades scythed the air as it rose and hovered above the landing pad. Banking left, it hurtled at 140 miles per hour toward the Libyan coast. In a cramped control room, the two young drone pilots and the engineer clustered around a monitor, receiving high-definition images from a sensor mounted beneath the aircraft's nose. Around midmorning, the usual routine aboard the *Phoenix*—a



Regina Catrambone, right, and Canadian doctor Simon Bryant aid a Nigerian man who fled Boko Haram's reign of terror.

HAVE THE CAPABILITY, THE SKILLS, AND THE **MORE PEOPLE WILL DIE?"**

game of Texas Hold 'Em on the lounge conference table and chef Simon Templer, an old friend of Catrambone's from New Orleans, puttering around the galley preparing lunch—stopped suddenly as word spread through the ship: possible rescue. The drone had spotted a boat about 35 miles off the Libyan coast. The only question, Regina explained as the captain opened the throttle and sped south, was whether the MRCC would order an Italian naval vessel to handle the pickup or the *Phoenix* would be given the job.

"Last time," said John Hamilton, a rangy, sunburned member of the Maltese rescue team, "the migrants had no food or water for 12 hours." Simon Bryant, an Alberta physician on a six-month Doctors Without Borders contract, turned to David Johnston, a grizzled logistician from New Zealand. "Time to get changed," he said, and the two men disappeared below.

THIS YEAR IS shaping up to be an unprecedentedly active one for "irregular migrants"—a description adopted by the United Nations to avoid stigmatizing them with the term *illegal*—journeying across the Mediterranean Sea. In 2009, according to Frontex, the EU's border patrol, 11,000 people made the perilous journey from the beaches of North Africa to Italy and Malta. Two years later, the Arab Spring unleashed instability throughout the region, and the number of migrants crossing from Libya or neighboring Tunisia jumped to 64,300. Since then a devastating civil war in Syria, radical Islamic terror in Nigeria and Mali, forced military conscription in Eritrea, and the beginning of a third decade of chaos in Somalia have driven those numbers ever higher. Some refugees come from as far away as Bangladesh, driven by economic misery to make marathon odysseys by land and sea before arriving in North Africa. By the end of 2015, this year's numbers could exceed 250,000 people.

The deepening woes of Libya, the main launching point for migrant ships, have facilitated the exodus. Operating in the anarchic country with impunity, human traffickers charge refugees between $500 and $2,000 for a journey that typically starts in Tripoli, where the migrants are warehoused for weeks and sometimes months before being trucked to beaches west of the capital. Some of these smugglers are astute businessmen who aspire to provide a safe service for their clients. ("I even heard about one smuggler who allows kids under five to ride for free," Catrambone told me.) But the majority are unscrupulous operators who show migrants large and safe boats in Libyan ports, then pack them instead onto derelict fishing vessels or open inflatable dinghies with no safety equipment and no crew. The migrants are given a plastic bottle of water each and maybe a single compass for the two-day journey. There's often no going back: dependent on rapid turnover and determined to prevent word from spreading

"THEY CAME IN TWO NIGHTS AGO," MAHMOUD TOLD ME. "THEY SAID, 'YOU WILL GO TO ITALY ON A VERY NICE BOAT. NO PROBLEMS.' AND THEY TOLD US IT WOULD TAKE ABOUT TEN HOURS, BUT **I KNEW THEY WERE LYING."**

about the bait and switch, the smugglers will typically force migrants to board the craft at gunpoint. The boats are piloted either by volunteers among the migrants or by a captain, hired by the smugglers, who avoids capture by leaving the boat in the middle of the journey and jumping to a smuggler mother ship. The boats are abandoned at sea and either recovered by fishermen and resold to smugglers or destroyed by EU naval forces.

The refugees have good reason for hesitation. The crossing from Africa to Italy is now, according to the UN, "the most lethal route in the world," with a record 3,419 migrants perishing in 2014, and another 2,000 by August 2015. On an icy February night, three of four inflatable rubber boats filled with migrants capsized in frigid, storm-tossed waters off the Libyan coast. At least 300 died, including 29 who died of hypothermia during the rescue of 106 survivors. Two months later, a 60-foot fishing boat full of migrants capsized when it collided with a Portuguese merchant vessel at night and the passengers all rushed to one side. A Bangladeshi survivor reported that smugglers had locked hundreds of people, including dozens of women and children, in the hold. Twenty-eight refugees survived.

In October 2013, Italy launched a $10-million-per-month rescue operation called Mare Nostrum, the ancient Roman name for the Mediterranean. The Italian Navy deployed an amphibious assault carrier, two frigates, and two search and rescue vessels just beyond Libyan waters—and saved 130,000 people the first year. Like MOAS, Mare Nostrum operated under the assumption that every migrant journey is a dangerous one, and its rescues targeted not only foundering vessels but also those that seemed to be in no imminent peril.

But the program faced a backlash from conservative Italian politicians, who protested that Italy was unfairly shouldering the burden of the migration crisis. According to European Union policy, the country where a migrant first lands is obliged to handle his or her request for asylum; as a result, tens of thousands of refugees are awaiting processing in Italy. If their requests are rejected—as happened in 21 percent of the cases in 2013—the migrants are dispatched to expulsion centers to await deportation. Many refugees, of course, leave Italy long before that point, making it across Europe's porous borders to Germany, Sweden, and other countries, where they either work as undocumented aliens or apply for asylum there.

Last October, Italy replaced Mare Nostrum with the far more modest Operation Triton. Overseen by Frontex, Triton is backed by European leaders like UK Foreign Office minister Joyce Anelay, who argued that Mare Nostrum's ambitious sweep had created a "pull factor" that encouraged migrants to cross.

Triton costs less than a third of what Mare Nostrum did, and it mostly patrols an area 30 miles off Italy's coast. But since Mare Nostrum was terminated, the number of migrants has increased sharply. After the drowning deaths of those 300 migrants last February, Nils Muiznieks, commissioner for human rights at the Council of Europe, declared, "The EU needs effective search and rescue. Triton does not meet this need."

INTO THAT multinational mess came the Catrambones. The couple first met in 2006 on a beach in Regina's hometown of Reggio di Calabria, on the toe of Italy, where Chris had gone to seek out the birthplace of his great-grandfather, who immigrated to America in the late 19th century. They got married in 2010 and live in Malta with their teenage daughter, Maria Luisa.

In July 2013, the couple were cruising the Med on a rented yacht. The trip was, in part, Catrambone's birthday gift to himself after a profitable year. "I love to take my family out and get away and enjoy life, and I convinced Regina, 'Let's go out and explore these waters around our home,' " he recalled.

One day near Lampedusa, an Italian island south of Malta that has become a purgatory for tens of thousands of migrants, Regina was sunning on the top deck when she noticed a winter jacket bobbing in the water. The Catrambones asked their yacht captain, Marco Cauchi, a search and rescue commander moonlighting from the Armed Forces of Malta, about the incongruous piece of clothing. It was, he replied, almost certainly the jacket of a refugee. Cauchi told them how, during one military rescue, he'd watched a migrant sink beneath the waves a few feet from him. "There were 29 people on this boat that capsized, and most could not swim," he told them. "I saw those big eyes open, and I saw him go down so fast. I couldn't reach him. It stayed with me always."

Just a week before the couple's cruise, Pope Francis had called for "a change of attitude toward migrants and refugees"—a shift away from fear toward building international cooperation. Regina, a devout Catholic, had taken the pope's words to heart and has since enlisted the archbishop of Malta as a supporter. She has proved a vital ally as her husband developed a plan to buy a boat and ply the Mediterranean, doing the job that governments seemed reluctant to take on. "I'm basically the operations guy," says Catrambone. "Regina brings in the humanitarian element."



Preparing to disembark at the Sicilian port of Augusta



He recruited Cauchi as well. "I said to Marco, 'If I do this, will you come on board with me?' " Catrambone told me. "And he said, 'You're crazy, but if you do it, I will.' "

Catrambone decided to bypass applying for grants or government aid and financed the venture out of his own pocket. "Christopher's philosophy is carpe diem," says Regina. "We both believed that something has to happen now, and that if you have the capability, the skills, and the money, why do you need to wait? In the meantime, how many more people will die?"

Just the night before we arrived, the ship steamed into Augusta, Sicily, packed with 372 refugees, the culmination of the largest rescue operation in MOAS's short history. It began the morning of June 6, the 71st anniversary of D-Day, when the sea was calm after five days of dangerously high swells. Sure enough, as Ian Ruggier, another Maltese army vet who serves as chief of planning and operations, told me, the MRCC radioed early in the morning with a report of migrants in trouble and directed the ship to a GPS point 30 miles off Zuwara, a beach west of Tripoli that is the most popular launch point for smugglers. Soon, Ruggier spotted a two-deck fishing boat packed with nearly 600 people. Suddenly, a second vessel overloaded with refugees emerged out of the mist, then a third, listing badly, two bilge pumps furiously pumping out water. "If this one had gone over, it would have been a tragedy," Ruggier told me. "You had 500 people in the hold, and they would have had to climb out

of a single two-square-foot hatch."

Ruggier jumped into one of the *Phoenix*'s rigid-hulled inflatable boats (RHIBs) and raced for the vessel in distress. He had just reached the stricken boat when a fourth emerged out of the fog, and a fifth. My God, he thought. There must be 2,000 migrants in an area the size of two soccer pitches.

Alerted by MRCC, support vessels began arriving. RHIBs from half a dozen ships darted among the refugee boats, distributing life jackets, taking on passengers, speeding across the water, off-loading them onto military ships and the private rescue craft. The *Phoenix* helped rescue 2,200 people, taking 372 aboard. By one o'clock, the *Phoenix*'s two decks were packed.

Ruggier has intercepted pirates in the dangerous waters of the Gulf of Aden, off the coast of Somalia, and run rescue operations in Maltese waters, but never on this scale. "It didn't feel like a rescue," he told me. "It was more like a military exercise."

IN LATE MARCH, as the Catrambones were preparing for the six-month rescue season, I made my first trip to Malta, the densely packed island nation of 423,000 where they live. A bastion of Christianity during the Crusades and a vital Allied supply station in World War II, the former British colony has been reborn as a global financial center and a popular location for Hollywood filmmakers, who like its generous tax breaks and generically Middle Eastern look. It's also smack in the middle of the European debate over migrants. As I taxied down to Marsa, the grimy commercial port, I passed a barracks surrounded by barbed wire and filled with sub-Saharan refugees. Malta's government says it is sympathetic to the migrants' plight, but after accepting about 19,000 in the past decade, it insists it has room for no more.

I found Catrambone on the aft deck of the *Phoenix*, surrounded by the sounds of drilling, hammering, and scraping. The hull was getting a new paint job, and the crew was blasting off the rust. "As soon as the boat came back in October, we started doing work. It's a big steel boat, and every single structure needs to be in perfect shape for the season," said Catrambone, a shambling man with tousled black hair, a Lincolnesque black beard, and a trace of Louisiana drawl. Recently, after the venture began attracting media attention he hired Robert Young Pelton, the veteran war journalist and author of *The World's Most Dangerous Places*, as a strategic adviser.

He led me up a staircase to the upper aft deck and pointed out two RHIBs mounted snugly on metal cradles. "Feel this!" he urged, running his hand along one of the double-hulled, 20-foot dinghies, each equipped with two 70-horsepower outboard engines. "It's got foam filling, so even if you puncture it, it will still float." Catrambone's team had just moved the cradles to a lower position and installed two large pipes to guide the craft gently into the water. "Before, we were using a crane," he said. "In Force 4 winds, it was highly dangerous."

The last time Catrambone threw himself into the business of boat renovation, the circumstances were rather different. In 2005, he was working as a freelance insurance-claims investigator after earning a degree in criminology at McNeese State University in Lake Charles, Louisiana. "He had this Volkswagen Passat with tinted windows, and a video camera, and we'd go places and he'd videotape people through his window," recalls Templer, the chef, who lived in the same apartment building in New Orleans. Catrambone was "kind of neurotic," Templer remembers. "He was like Kramer from *Seinfeld*—this awkward, geeky type, but cool and laid-back at the same time."

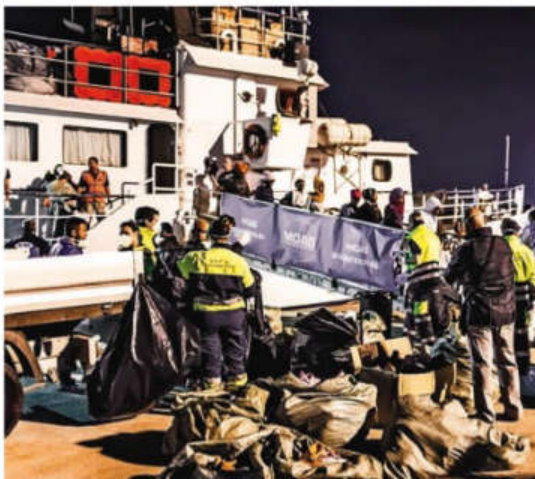
That September, Catrambone was on a job in the Bahamas when Hurricane Katrina struck New Orleans. Homeless, he set up shop in a three-cabin boat in a marina on Saint Thomas, in the U.S. Virgin Islands, and invited Templer and another dislocated friend to join him. With $20,000 in pooled compensation from FEMA, the trio leased a decrepit double-decker paddle-wheel boat and turned it into Cajun Mary's Riverboat Lounge, a floating bar and restaurant. "It was, in our way, our mourning for and tribute to a city we loved so much," said Catrambone.

Around that time, he got a call from G4S, a huge private security firm based in the U.S. It offered him a different sort of insurance-related assignment: locate medical treatment in Dubai for a U.S. contractor who had suffered a herniated disk there. That job led him within the year to northern Iraq, where insurance providers for big security companies were struggling to provide decent hospital care for contractors injured by roadside bombs. Catrambone assembled a network of secure hospitals in Iraqi Kurdistan, then did the same in Afghanistan. Soon he started his own war-zone insurance company, and Tangiers International, named for his favorite North African city, took off. By the time he was 26, he was a multimillionaire.









CLOCKWISE FROM TOP LEFT: Regina Catrambone assists migrants; a Maltese coast guard vessel in Sicily; operations chief Ian Ruggier provides life vests; men rest after their ordeal; medics hand out food; the crew first spots the migrants' raft; refugees prepare to disembark; Italian Ministry of Health doctors in Sicily; the *Phoenix*'s medical team; the refugees on board; ready-to-eat meals; migrants transfer to rescue boats.










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AT THE END of 2013, Catrambone left Tangiers in the hands of his subordinates and began combing through online catalogs searching for a ship broker.

"Christopher is like a hurricane," says Regina. "Standing in the eye, it's very calm for you, but for the people around you, he can be a disaster. He's blowing around, people think he doesn't have a plan, but he's very disciplined when he needs to do something."

He ultimately tracked down the *Phoenix* in Norfolk, Virginia. It was love at first sight. Built in 1973 and originally used as a fishing trawler, then later as a scientific-research vessel, the ship had a steel hull, a deep draft, and a propulsion system built by Wärtsilä, a Finnish company known for its icebreakers. "She was a badass little boat," Catrambone says. He bought it on the spot for $1.6 million, spent $3.5 million more on a refit, and sailed it back across the Atlantic himself, with Cauchi at the helm and Templer in the galley. At one point the *Phoenix* struck something, possibly a container. "We heard a noise like *boom-boom-boom,* and then it stopped," Cauchi recalled. He feared that the boat's new $1 million propeller had been destroyed. In fact the collision did break off a chunk, but Catrambone wasn't fazed. "He was a mad dog," said Templer. "He was like, 'Let's go! Let's go!' "

When the *Phoenix* launched in August 2014, European diplomats and journalists were dubious. "They did not give us a lot of respect," Catrambone said. "They suspected we were rogue Greenpeace-type activists causing trouble."

Catrambone's doubts grew as well. "After five days at sea, we were frustrated," he told me. "I was saying, 'This is all a lie, the migrants are not even coming.' " Then, on day seven, the *Phoenix* carried out a double rescue of a fishing boat packed with about 300 Syrians and then an inflatable dinghy filled with sub-Saharan Africans. The MRCC took note and gave the *Phoenix* temporary command of three other vessels. MOAS had proved itself legit. By the time the mission ended in October, Catrambone said, "we didn't want to leave." They stopped only because the boat was in dire need of repairs—and because the effort was draining the Catrambones' finances.

Indeed, last March, Catrambone doubted whether he'd be able to deploy the drones in 2015. Earlier the previous year, he had struck a deal with Hans Georg Schiebel, owner of the Austrian military contractor Schiebel, for the pair of Camcopter S-100's, pilotless mini-choppers that can fly 380 miles without refueling and are used by navies around the world. Schiebel initially wanted to sell the drones to him for $5.5 million, but Catrambone persuaded him to lease them for last year's abbreviated three-month rescue season at $400,000 per month. "I told Hans, 'Show the world that this drone can be used for peaceful purposes,' " he recalled. "Hans said, 'Deal.'" For this year's season, Schiebel agreed to lower the monthly rate to $300,000 and kick in the last two months for free. But $1.2 million was still way too high for Catrambone's budget.

Now, after burning through much of his fortune, Catrambone was looking for donations. Doctors Without Borders had given $1.6 million; Germany's Oil and Gas Invest was paying for the boat's fuel. But he was short the $1.8 million for the drones. "We're going to have to crowdfund for it," he said. "Organizations like Doctors Without Borders are just not into paying for drones."

A few weeks later came good news: Avaaz, a global activist organization, had agreed to kick in $500,000 for the two S-100's. Catrambone would raise the rest just in time for rescue season.

NOW THOSE S-100'S were proving to be critical assets. Hours after the drone launched from the *Phoenix*'s helipad, Regina and I stood on deck, scanning the southern horizon. The Nafus Mountains rose up before us, about 30 miles away, wrapped in a dun brown desert haze. Regina guessed that the swells hitting the beaches of Zuwara would be about 18 inches high—perfect conditions for smugglers to launch their vessels.

Approaching slowly across the water, a distant white speck came into our line of vision. Slowly, the dot took shape: a white inflatable dinghy, about 25 feet long, with a single outboard motor, packed with what looked like about 100 people.

The ship buzzed with anticipation. On the aft deck, Bryant, the doctor from Alberta, zipped up his white protective suit and slipped on surgical gloves and rubber boots. The rest of the medical team, similarly attired, brought up 100 small blue bags from the hold, each containing socks, a towel, white coveralls, two bottles of water, and a package of protein bars. Cauchi, Ruggier, and three crewmen lowered an RHIB into the water and sped toward the tiny craft.

From several hundred yards away, I watched the rescue unfold: The RHIB approached the dinghy slowly, careful to avoid exciting those inside and causing the fragile craft to tip over. Cauchi, speaking English through a megaphone, reassured the migrants—all of them, it seemed from my vantage point, sub-Saharan. The team passed out orange life jackets, loaded small groups onto the RHIB, and ferried them to the *Phoenix*. One by one, the migrants bridged the narrow gap between the boats and unsteadily boarded the bigger ship. Four young Somali women in head scarves, the first to set foot on the *Phoenix,* collapsed on the deck and clasped their hands in prayer. Soon the deck was filled with refugees from Somalia, Nigeria, Eritrea, Mali, and other blighted corners of the continent, 77 men and ten women—weary, grateful-looking people whose ordeals over recent weeks and months could scarcely be imagined.

With a blue MOAS baseball cap pulled low over her brow, Regina moved confidently among the refugees, bending down to reassure a worried-looking 15-year-old Ethiopian boy traveling by himself, searching for a Nigerian who had been punched in the eye during his voyage. The *Phoenix* was waiting for communications from the MRCC, which would either order it to take the migrants to a port in Sicily or tell it to remain in the area on patrol. "We have such a small group, we would rather continue," Regina told me. "But we are in their hands."

It's this work with the refugees that has been most fulfilling for Regina. In 2014, she shopped the markets of Malta for sacks of rice and vegetables and, working as Templer's assistant, cooked hot meals in the ship's



ITALY IS OBLIGED TO KEEP THE MIGRANTS UNTIL THEIR APPLICATIONS FOR ASYLUM SAID. "THEY DON'T ALWAYS TAKE FINGERPRINTS, **SO THE MIGRANTS HOPE TO**



Waiting for Italian authorities in Augusta, Sicily

ARE PROCESSED. "BUT THEY ARE NOT STRICT," CASINI **SLIP THROUGH."**

cramped galley for hundreds of hungry people. "We were using the cover of an oil container like a tray, and I was going up and down with the tray covered with rice and tomatoes," she said. This year she's spent dozens of hours in the onboard clinic. "I remember this Somali lady, she was with her two-and-a-half-year-old son," she told me. "They had been 12 hours in an open boat. We took him from the dinghy, and he was not responsive." Regina carried the boy to a bed, where a doctor administered an IV. Soon he was smiling, active, and playing with a Scooby-Doo doll and a toy Ferrari.

AS THE CREW awaited its orders, I fell into conversation with Abdisamat Mohammed Mahmoud, a 25-year-old Somali with a long, angular face who was leaning against the rail, staring into the sea. Born and raised in Mogadishu—"I cannot remember a moment of peace there," he said—he had fled Somalia as a teenager and lived for six years in refugee camps in northern Kenya, where he taught himself English and Arabic. He and his wife had left to find work in South Sudan and, in April 2015, when the new country became too unstable, moved on to Khartoum, the Sudanese capital, with a plan to cross the sea to Europe. Smugglers packed them on a truck for the grueling weeklong journey through the desert to Libya. When they reached Tripoli, he was separated from his wife and held in a basement cell for 51 days while he waited for his family in Nairobi to wire $500 for the crossing.

"They came in two nights ago, and they said, 'Let's go,' " he told me. "They said, 'You will go to Italy on a very nice boat. No problems.' And they told us it would take about ten hours, but I knew they were lying." The truck pulled up to the beach, and the migrants were ordered out, at gunpoint. "Most of the Somalis had never seen the water until that night. The women were crying," he said. "When I saw the boat, I was shocked. I thought, 'They have cheated us.' " Unlike on the big fishing vessels, which usually have experienced captains, migrants aboard dinghies are generally told to aim for the Bouri Offshore Field and left to their own devices.

The migrants, Mahmoud said, had pushed out to sea at around five o'clock that morning. They carried a compass, which turned out to be broken, and had a half-liter bottle of water each. People cried, moaned, and prayed. "Some really thought that this was the last day in the world. I was telling them that we will be rescued, and that we will eat our breakfast in Italy," he said.

They'd been afloat for about eight hours when Malshak Adano, a 32-year-old Christian fleeing the violence in northeast Nigeria, saw the *Phoenix* in the distance and began shouting and waving. Then, as Adano himself told me, "a man with a megaphone said, 'Don't be afraid, we're giving you life jackets, we're going to protect you.' I thought, God has answered my prayer."

The next morning we passed Malta. The MRCC had dispatched orders to sail for Pozzalo, on Sicily's southern coast, and off-load our 77 passengers. A dozen Somalis crowded the starboard rail, silently absorbing their first view of Europe. Soon Mahmoud began peppering me with questions. Was Sicily an island? How far was it from the mainland? How long would it take to reach Rome? His first mission, he told **continued on page 104**



Route setter Max Zolotukhin at Planet Granite in San Francisco



The Path to Beta Flash Re-sis-tance

The artificial holds and lines devised for gyms and climbing competitions don't just happen—they're created and placed by devious people who want to force you to stretch, contort, curse, fail, and fall. **BRENDAN BORRELL** goes behind the scenes with the masterminds who make this booming sport a serious challenge.

Photographs by
Carlos Chavarría

The route setter studied the blank gray surface.

His section—part of an array of climbing walls set up outdoors under a huge tent—was 16 feet tall and 10 feet wide, and it loomed above the chalk-dusted mat at a forward-facing 40-degree angle. His eyes darted from one position to the next, dancing along a grid of bolt holes that were laid out every six inches, like a sheet of graph paper. Strewn around the stage were thousands of Crayon-colored climbing handholds, a wicked assortment of crimps and jugs and pinches and pockets that he would use to fill this void. After a moment of reflection, he unholstered his cordless drill and affixed a bright blue hold to the wall with a whir and a screech. The hold had an intricate, primal-looking pattern etched into it, along with a pocket that could fit (barely) two flexed fingers.

It was a Tuesday in early June, and the setter, Max Zolotukhin, was part of an elite six-man team planning 36 routes, or problems, for the Bouldering World Cup in Vail, Colorado. The best climbers in the sport would be arriving that weekend, including Jan Hojer, the six-foot-one German powerhouse, and Adam Ondra, the Czech bean sprout with sinewy arms and a mop of curly hair. The setters would provide the challenges that would separate their performances.

Bouldering routes are shorter and more intense than roped routes, typically consisting of just five to fifteen moves, which the climber performs to advance from one plastic hold to the next in order to "send" the problem, or complete it. One of the things setters are often asked by passersby is "Where's the map?"—as if they're following orders passed down from a board room in Turin, Italy, where the International Federation of Sport Climbing has its headquarters. But the setters are the wizards who really run the show. They are to a climbing wall what coders are to a video game, the geeks who keep you up all night obsessing over that winning sequence.

Zolotukhin, who is 29 and is known as M.Z. to climbers at Planet Granite in San Francisco—his home gym—was the rookie here, and naturally he had the flashiest plans. With a bulky pair of Five Ten sneakers and a Husky tool belt around his waist, he looked like a skateboarder working construction. He is rangy and muscular, with trim sideburns, taped fingers, and a silver hoop through his right ear. Whether it was his freshness on the competition circuit, the scope of his ambition as a setter, or a more general quality of his meticulous character, he had come to Vail on a mission.

"I do a lot of my thinking on planes and other places where I don't have Internet access," he told me as a gondola hummed up the grassy ski slope next to the stage. He showed me an iPhone spreadsheet in which he had broken down each of the eight wall bays he might get assigned and described which problems he might set, using jargon-laced shorthand.

"Inside flag dual tex half moons; volume under angle change bay 1," he wrote beneath one entry, referring to a sequence that would force climbers to counterbalance themselves using the foot closest to the wall.

"Super dorky," he said of his notes. "No one does that."

The problem Zolotukhin was setting just now was a big deal: the last climb in the men's final. He stepped up to the wall and dangled from the pocket with the ring finger and middle finger of his left hand. Then he reached up with his right hand and wrapped his fingers around his wrist. His goal was to force the athletes to hoist themselves up to the next hold using this pull-up move, which is called a handcuff. In the next move, they would have to spin 360 degrees to reach a third hold with their left hand.

"People will figure that out?" I asked.

"If you don't give them any other options," he said.

Route setters are to a climbing wall what coders are to a video game, the geeks who keep you up all night obsessing over that winning sequence.

LAST YEAR, according to the *Climbing Business Journal*, 29 new indoor climbing gyms opened in the U.S.—bringing the total nationwide to roughly 365—which helps explain why route setting is now a viable alternative to a life of dirtbaggery. The sport has taken off even in Midwestern cities where the nearest rock is a meteorite in a cornfield. Today, head setters at top gyms earn salaries of $70,000 or more, fly across the country to guest-set at other gyms, and work national and international competitions.

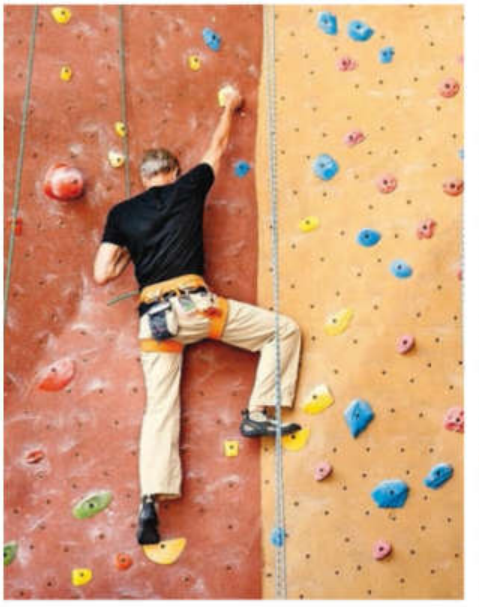
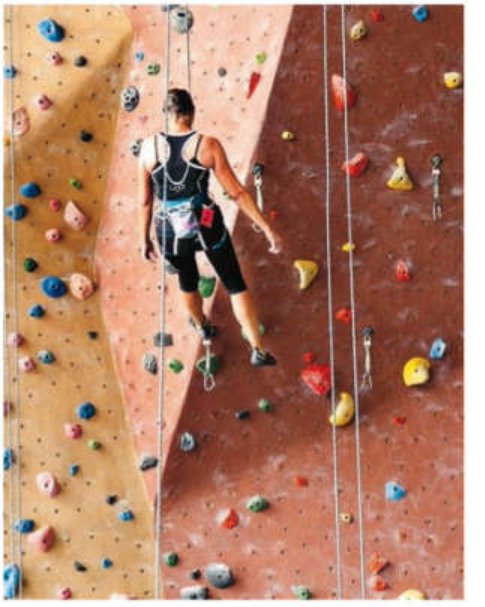
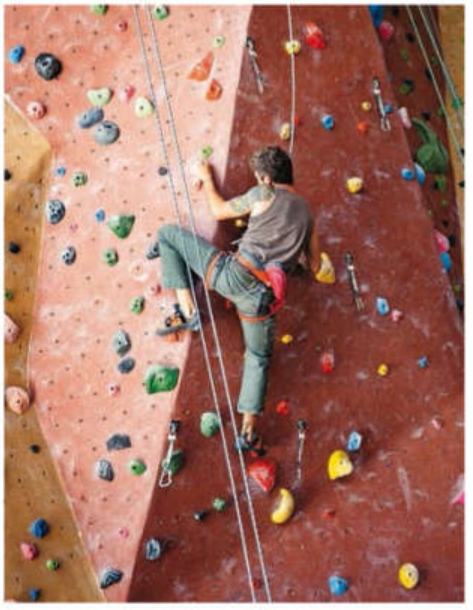
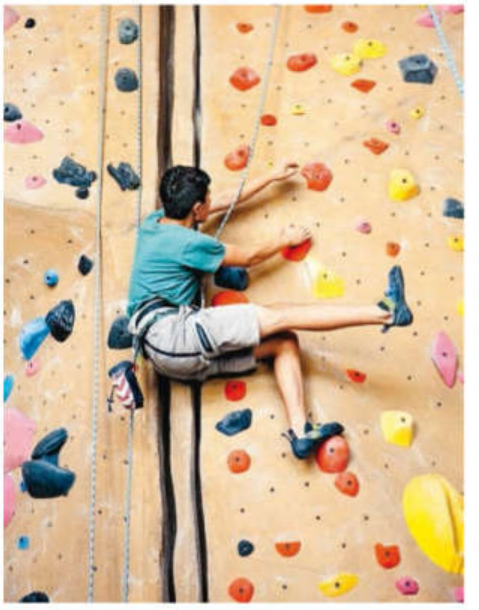
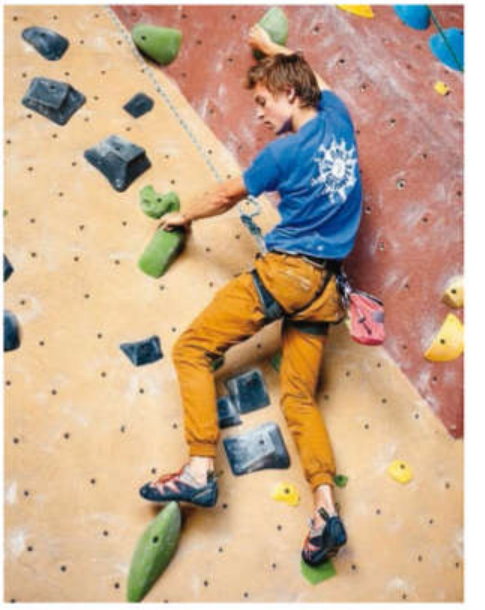
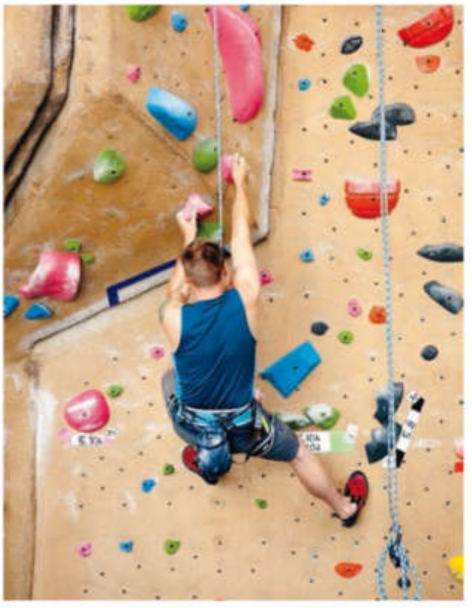
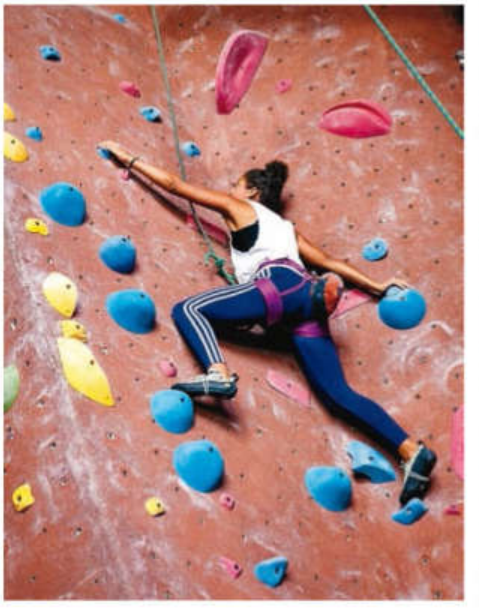
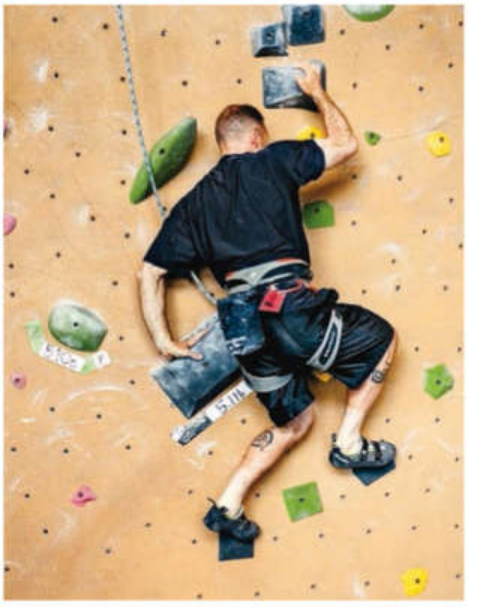
"The best thing happening now is that route setters are getting their due," says Chris Warner, owner of Earth Treks, which operates four gyms in Maryland and Colorado.

As recreational rock climbing gained popularity in the early 20th century, artificial walls were little more than a way for climbers and alpinists to train during the off-season. In the late 1930s, Clark Schurman, chief summit guide on Mount Rainier, built a 25-foot practice wall out of granite boulders and troweled concrete in west Seattle that still stands today. One of the first indoor climbing walls in the world, erected alongside a squash court at the University of Leeds in 1964, featured natural rocks cemented onto brick, along with hand-jamming cracks carved into mortar. The designer, Donald Robinson, now 88, had grown weary of watching climbers spend all winter in the pub and then injure themselves outside the moment Easter rolled around. "In those days, they wouldn't go to the gym," Robinson says. "That was for the common herd."

Though popular, these early walls had a major downside: you couldn't change the rocks. In 1985, François Savigny, a French engineer and rock climber, founded the company Entre-Prises and began selling the first bolt-on climbing holds made of polyester resin. Later the industry shifted to less toxic and more durable polyurethane—the stuff used to make Rollerblade wheels. Rather than reproducing inward-facing contours and fissures of an eroded cliff face, these holds could be endlessly rearranged on a flat wall. It took a while for modern holds to migrate to the United States. Seattle-based Vertical World, which bills itself as the first commercial climbing gym in the country, opened in 1987. Back then people were still gluing rocks onto cinder blocks.

Even in the late eighties, gym climbing was mainly something you did when you couldn't get to the crag. A couple of teenagers working the front desk might bolt a bunch of holds to the walls, but it was left to the climbers to

Opposite: Wall crawlers negotiate combinations at Planet Granite.

devise the routes. Route setting emerged as a professional pursuit in the 1990s, and it took off creatively in step with bouldering's increased popularity.

Which only makes sense. In bouldering the goal is not about attaining the summit along a particular set of pitches, but to use specific body movements to progress through a prescribed sequence of holds along both horizontal and vertical axes. Bouldering opened up people's minds about what was possible on a climbing wall. It made all climbing more precise, more mental.

In a typical gym today, setters mark specific routes with colored tape—or matching holds—to which they assign difficulty ratings. Bouldering problems are graded on the V scale, from the ladder-like cake walk of a VB (beginner) up to a V16, which requires gecko fingerwork and gravity-defying leaps known as dynos. Roped climbing routes go from the easy 5.0 to the nearly impossible 5.15c.

By the early 2000s, climbing walls had become the canvas for fleeting pieces of functional art. Routes need to stay up long enough for climbers to solve them and pump a fist at the top, but not so long that they become routine. Some routes are so obvious, they can seem as dull as pulling on a rowing machine. Others have a magical flow built in, and you land back on the mat with a buzz.

"In some ways, climbing outdoors is stifling and boring, because you are limited by nature," says Mike Helt, an instructor for the USA Climbing Routesetting Certification Program. "In here we are not limited by anything other than technology and the human imagination."

IN VAIL, ZOLOTUKHIN was beholden to a pair of experienced silverbacks on duty: the chief route setter, Percy Bishton, a boyish 43-year-old Brit with tousled gray hair, and Chris Danielson, 38, a renowned American whose russet beard was feathered with white streaks. Between the two of them, they had more than 40 years of experience bolting pieces of plastic onto walls. "I'm retired after this one," said Bishton, who opened one of the UK's premier climbing gyms, Sheffield-based Climbing Works, in 2006.

On Tuesday morning, Bishton called the crew over to review problems for the final. One setter had been inspired to mimic a wild swing from Jungle Book, a famous climb at a bouldering spot in southern Illinois called Holy Boulders, but it had evolved into something else. Zolotukhin, meanwhile, had set a problem he called Princess of Persia, which was modeled after a 1980s computer game featuring a hero leaping across spike-filled chasms and scaling vertical walls. Bishton liked that one. "It's very ambiguous," he said. "You can't really see how to do it."

Setting for a competition is a little different from setting in a gym. During the World Cup stop in Vail—an annual cash-awarding mini-tour for men and women held in various cities in Europe, North America, and Asia—the athletes are given brief, varying amounts of time to look at and attempt climbing problems. In the most difficult challenges of the event, the setters wanted to do more than just test the competitors' forearm muscles; that's a recipe for a tie, because all these athletes are ripped. Rather, they wanted to create a men's problem in the realm of V10 or V11, but one that was inscrutable enough that there would be a few successes ("tops"), a few falls, and one hell of a show.

As they reviewed the next climb, Danielson was casting about with a devious look on his face. "What are you seeing?" Bishton asked.

"I feel like it's too hard," Danielson responded. From a plastic tub onstage, he pulled out a wormy red, white, and blue hold about the length of his arm and covered in warty-looking bumps.

"A big knobbly cock!" Bishton joked. "Where do you want to put it?" Danielson held it up between two bulbous gray holds. The combination looked like a diagram from a medical textbook.

A large gym may stock 40,000 climbing holds, and when a new shipment arrives, setters will hide the ones they want to use first.

By then, Zolotukhin was free to focus on the handcuff boulder—the only final problem that hadn't been set. After screwing the pocket onto the wall where he wanted it, he worked backward to the starting holds. He needed them to be far enough to the right so that the climbers would have to let their legs dangle and ascend using only their arms, called campusing. At the same time, the pocket couldn't be so far away that shorter climbers would be at a disadvantage.

If you think about a climb as a sentence and each move as a word, the holds are individual letters. The most commonly used holds provide a horizontal edge that you can hang from. When the hold is extremely positive, which means it has a large lip or is otherwise easy to grab, climbers call it a jug. A crimp, by contrast, has an edge that's so thin, you can fit only your fingertips on it. When that edge is oriented vertically and off to the side, it serves as a side pull. Closer in it's a Gaston, which the climber pulls on with elbow bent, as if prying the lid off a coffee can. If the edge points toward the ground, then it's an undercling, and the climber must pull up and out to stay on the wall.

Pockets can be deep or shallow and can restrict you to using three, two, or even one finger. Pinches require you to squeeze the hold with the help of your thumb. Then there are slopers, which are smooth and round and might be used with an open-handed grip to maximize friction or for a mantle move, in which the climber pushes against, rather than pulls on, the hold. Some are designed only for a foot, with a surface just large enough to accommodate a single toe. Sometimes there's no foothold at all, in which case climbers must smear a foot against the blank wall, relying on the sticky rubber of their shoes. Finally, large holds, called volumes or features, alter the geometry of the wall and can be modified by screwing smaller holds, known as jibs, onto their surfaces.

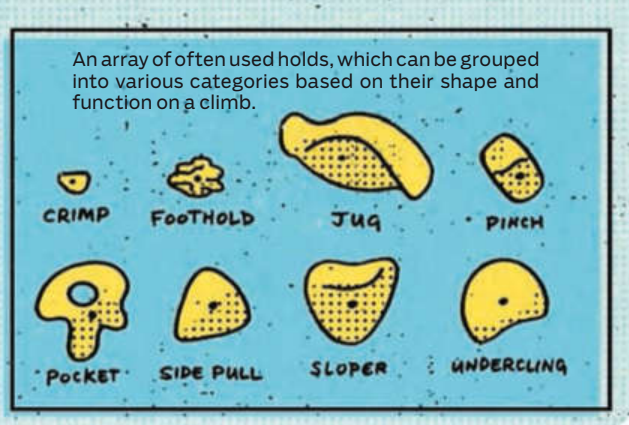
HOLDS COME IN an immense variety of shapes, sizes, and textures. One of the larger manufacturers, Colorado-based eGrips, sells more than two dozen styles, and most lines have somewhere between five and twenty different crimps. A large gym like Earth Treks may stock 40,000 holds, and when a new shipment arrives, setters will hide the ones they want to use first. Louie Anderson, a prolific Southern California shaper who has been designing holds since the dawn of the gym era, creates 1,000 new shapes every year. The designs have changed a lot from the early days, when holds were cast in earth tones and mimicked rock features. Today they're more artistic, colorful, and ergonomic, so that a day in the gym won't tear off your hard-earned calluses. The Missouri-based climbing company So Ill produces fluorescent green holds that look like alien baby heads.

Zolotukhin has a freakish handle on this diversity and can sort through the buckets of near identical crimps with ease. With each new hold in Vail, he moved up his ladder and completed a first draft of the sentence that stretched from the bottom of the wall to the top. Setters call this the skeleton.

At the end of the day, as a yellow slash of sunlight cut across the climbing wall, Garrett Gregor, a.k.a the Machine—a climber with a V-shaped torso—pumped himself up to test how Zolotukhin's route worked in practice, which is called forerunning. In this instance,

Let's Make This Difficult

Route setters have many ways to force you to flail. Renowned setter Chris Danielson explains some of the holds and strategies he uses to create a challenging sequence.

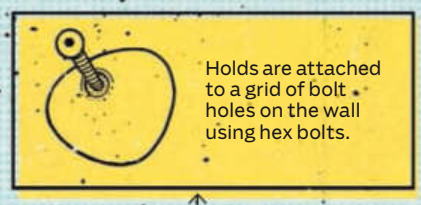




4. After stabilizing, he wedges between two large features as if pushing open an elevator door.

5. To finish, he twists his hips and drops a knee before thrusting upward and matching both hands on the finish hold.

3. He jumps to a half-moon feature, and his momentum causes him to swing away from the wall like a barn door.





2. He powers up to a crimp just large enough for his fingertips and grips it in a Gaston position.

1. The climber hangs with both hands on the starting hold.

→**Route setter** Chris Danielson created a bouldering problem for *Outside* that uses a "barn door" movement to keep climbers on the tips of their fingers. The climber shown here begins at a marked starting hold and must proceed through a series of powerful movements to complete the problem with both hands securely on the finish. In competitions, climbers typically have a fixed amount of time to tackle a given problem and are ranked based on the number of problems they complete, how many attempts are required for each, and the number of scored holds they successfully attain.

Illustration by DAN PAGE

the Machine pushed past the crux of the climb without having to do the handcuff or the hoped-for 360. In setter speak, he had "broken the beta."

Zolotukhin looked deflated. Sometimes it's fine for a problem to have several solutions, as long as they're as difficult as the intended one. In this case, what the Machine did defeated the entire purpose of the climb.

Zolotukhin and Danielson conferred about ways to make the handcuff mandatory. "It's really hard to compel people to want to do that," Danielson said. They had changed the pocket out several times, varying its depth and size, and had talked about ways to modify it with Bondo, the commercial putty used in car-body repairs. "If you make the pocket very good, you don't need that," Danielson said, referring to the handcuff move. "If you make the pocket very bad, you *may* handcuff but not be able to pull through."



Zolotukhin dials in the position of a hold

Manuel Hassler, a Swiss setter with Albert Einstein hair, suggested adding a second pocket high on the wall. This would bump the handcuff up and make the sequencing more pronounced: left hand in the lower pocket, right hand in the upper pocket, then spin around and grab a crimp with the left hand. Danielson liked the idea, but Zolotukhin was hesitant. "We can't make the whole problem a jungle gym," he said.

"I don't disagree. I'm just living in compromise-land," Danielson said.

"It would be really nice to get this to be a beautiful thing," Bishton said.

"The debate now is, you put a pocket here, you just jump to the pocket. Pocket. Pocket. Swinging around," Danielson said. "The crowd loves it, but it's not that interesting."

Bishton pointed at a large undercling on the right. "For sure, the jug is coming off," he said, pointing to a large hold he wanted to replace with something smaller and more difficult.

This put Zolotukhin on the defensive. "Some of the best photos happen in comps when you are on a jug," he countered.

"I don't like the jug in the middle of the route," Bishton said. "Then you get the fist pump of glory before they send it."

ZOLOTUKHIN'S VIMEO page, which hasn't been updated for a couple of years, features videos of him and his buddies hooting while sending problems like Wet Dream, a V12 in Black Velvet Canyon, Nevada. On the same page, you can find a short manifesto in which he subscribes to Ayn Rand's view of man as a "heroic being." Online he comes across as earnest, slightly pompous, and far less self-effacing than he is in person. "I want to be the best route setter in the country and I want people to know it," he writes. "Not for the sake of my little ego, but because I believe that productive achievement is man's noblest activity and I want to be judged by mine."

Zolotukhin was born near Kiev, Ukraine, and grew up in Gainesville, Florida, where he taped out his first route, at age 14, on his first day climbing. He raced through a dual degree in psychology and political science at the University of Florida in three years, in order to devote himself full-time to bouldering. At first he wanted to be a pro climber. In 2009, he took 16th at the American Bouldering Series (ABS) National Championships and competed at the World Cup.

Zolotukhin was feeling invincible that summer when he tried to boulder Supernova, a 5.14b sport climb in Rumney, New Hampshire, with only crash pads and spotters as protection. "I hit the pocket accurately but for reasons unknown, my body sagged out and I helicoptered off," he wrote later on a blog. He fell more than 20 feet, missed the pads, and fractured his talus on a jagged boulder. His friends carried him down to an ambulance.

"It was a really dumb thing to try to do," he told me. He flew back to Florida and spent the next two and a half months on his mother's couch. About a week after the accident, he was doing pull-ups and using a hang board to maintain his finger strength. After five weeks, he began bouldering easy routes with a plastic walking boot on his ankle. He was obviously a gifted athlete, but he realized he would never be an Alex Honnold or Kevin Jorgeson. As he reined in his daredevil instincts, setting became his outlet.

"I don't have exactly what those guys have, but I have something else that is equally valuable, and that is a creative mind," he says. "In the end, I still have an awesome climbing career, and I love it just as much."

In August 2011, Zolotukhin moved to California to take a full-time position at Planet Granite, which has three gyms in the Bay Area and one in Portland, Oregon. As setting has become professionalized, getting certified for competitions is like earning one's stripes as a master welder.

After attending a clinic run by USA Climbing, he completed an internship under Danielson during the Unified Bouldering Championship in New York City in 2011, and, later, an apprenticeship in Atlanta under Mike Helt. By 2013, he had earned the rank of assistant route setter and was invited to set at the ABS Nationals. Finally, he was awarded the coveted slot at Vail, his first event on the world stage.

ON SATURDAY afternoon, black curtains hung in front of the climbing wall, concealing it from the crowd gathering on the grassy lawn. Zolotukhin, Danielson, and the other setters were wobbling on their ladders. I saw Bishton scowling at the edge of the stage like a true Englishman. "It's bullshit," he told a friend. "It's a waste of a boulder!"

The Machine pushed past the crux of the climb without having to do the handcuff or the hoped-for 360. In setter speak, he had "broken the beta."

He was ticked off because he hadn't had a chance to finalize one of his problems before Danielson took it down on Tuesday. The start featured five blue triangles, which gave the male finalists a platform from which to lunge toward a massively awkward, bubble-shaped volume to the left. Then the climber would have to make his way up the arête, or the edge of the wall, to the top, where he'd have to reach a second bubble. A series of tiny holds dotted the wall like a trail of bird droppings. These were footholds.

"What's with all the feet?" Bishton asked.

"I haven't decided yet," Danielson said.

"Fucking hell, Christopher!" he scoffed. "It doesn't look very hard." Bishton left him alone, and Danielson kept tooling away. Then he took a front-row seat to watch the show.

Adam Ondra gazed up at Danielson's climb, the third problem **continued on page 102**



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PEAK

WITH AIRBNB AND YELP ALREADY OPERATING IN CUBA'S CAPITAL, WILL HORDES OF AMERICAN TOURISTS SIPPING MCDAIQUIRIS RUIN THE VERY AUTHENTICITY THAT DRAWS US TO THE REBEL ISLAND NATION? **PATRICK SYMMES** EXPLAINS WHY YOU SHOULD GO NOW—BEFORE CUBA CHANGES, WHILE IT CHANGES, AND BECAUSE YOU WILL CHANGE IT YOURSELF.



HAVANA

PHOTOGRAPH BY
SEBASTIANO TOMADA



After decades of rusted poverty, Cuba's future is finally arriving.

IN FEBRUARY, I WAS ROLLING IN AN OLD, SQUEAKING TAXI THROUGH HAVANA, HEADED BACK TO MY RENTED DIGS ATOP A HOUSE IN THE TINY CHINATOWN. I GOT THE ROOM IN A WAY MANY TRAVELERS TO CUBA WILL RECOGNIZE: A FRIEND PASSED ME A PHONE NUMBER, WHICH WAS NEVER ANSWERED.

Eventually, days after arriving in Havana and after pursuing the owner halfway across the city in person, I booked the room, which had been available all along. That was how Cuba worked, or didn't work. After 23 years reporting all over the island, I'd grown accustomed to the frustrating mixture of disciplined dictatorship and tropical chaos, the steady state of an island where nothing seemed to change, ever.

But travel is best in the cracks, in the unexpected encounters between appointments, in the crucial subtleties revealed when—according to our expectations and schedules—nothing is happening. So it was that night. My taxi passed by a restaurant, and I looked with exhausted envy at the warm interior, the soft lights, the well-dressed people eating from nice plates. Vibrant, disorganized music spilled out the doors, and a woman was dancing, spinning alone.

We kept moving, and I vowed to come back another day. But then a sudden doubt hit me. The place looked fun now, but would it be tomorrow? At the end of the block, I jumped out of the taxi and walked back.

The restaurant, Siá Kará Café, was unusual for Cuba, even weird: lots of cushions and low seating, eclectic decor, and a large and attentive staff serving food that arrived promptly. What's with that? Even more unusual were the guests. I was used to Europeans and Canadians idling in the bars, but here were actual Cubans, including a pair of uniformed flight attendants for an airline I'd never heard of and a loud family celebrating something over beers and beef skewers. There was a good piano player and then a great one, playing song after song, many of them improvised or unheralded, a fusion of jazz and classical, an almost heedless performance cheered on by the increasingly drunken customers.

Was this really Havana, the grim citadel I'd been obsessing over for two decades? Was this the real Havana at last? A place as good as the legend?

Outside, cooling off, I noted the rest of the block. Dead. Dead and dark in the truly Cuban way. Both sides of the street were a long run of shuttered entrances and windows.

So what? I'd bought countless meals for Cubans in tourist places that they could never afford—or even enter—on their own. But this was the first time in 23 years I'd sat, eaten, danced on an equal footing with Cubans themselves, and it was for one simple reason: they could pay for it.

A nice restaurant, a good song, a cold drink. So what? So long to the old Cuba, that's what.

AMERICANS ALWAYS say we want to see Cuba *before*. We don't really say before what.

Before it changes into something else? Before Burger King gets there, before Nike and Spotify and global Taylorism turn Cuba into just another place? This is Cuba's dilemma. Isolation and authenticity are its greatest lures, proof that the rebel island isn't just anywhere. But they come at a terrible price. For Cubans, the quaint sleepiness that pops up in our viewfinders is a rusted poverty. And for foreigners, nothing is ever authentic enough.

AMERICANS ALWAYS SAY WE WANT TO SEE CUBA *BEFORE*. **BEFORE IT CHANGES INTO SOMETHING ELSE?** BEFORE BURGER KING GETS THERE, BEFORE NIKE AND SPOTIFY AND GLOBAL TAYLORISM TURN IT INTO JUST ANOTHER PLACE?

Even stomach bugs don't plague the modern traveler as much as the nagging suspicion that *this* isn't really *it*. The *it* was always some time ago, in some other place. We fear we are missing Cuba the way it was, or was supposed to be. We don't want to be those people, the ones who arrived too late.

But that's nearly impossible. Today's jet-setter expects, as travel writer and historian Tony Perrottet told me, "to be the only traveler in a remote Amazon village, the first to find a quote-unquote untouched outpost in New Guinea. This is at the heart of the frustration travelers will no doubt feel in Cuba."

In other words, we want to see the island before we ourselves can get there to ruin it.

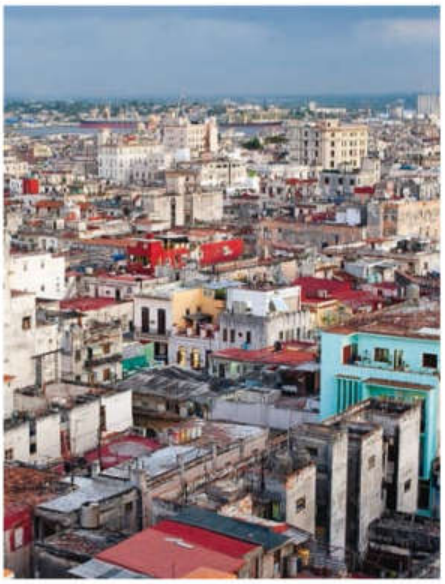
Bad news: everybody but us is already there. Cuba's 60,000 hotel rooms are booked solid by more than two million tourists each year, mostly Canadians and Europeans who spend their visits at wrist-band beach resorts that have precisely zero correlation to unspoiled anything. The U.S. severed diplomatic ties and cut off trade with Cuba back in 1961, and for decades the Treasury Department has blocked Americans from using credit cards in the country. Those who visited Cuba legally had to book educational or cultural tours that were nominally sponsored by universities or nonprofits and supervised by polite functionaries of the Cuban state tourism authority. That meant being shuttled from the Museum of the Revolution to a canned cabaret at the Tropicana, with a stop in the colonial hill town of Trinidad and one afternoon of free time to encounter a Cuba off the books. It wasn't all so bad: in the remote town of Baracoa, I once met a busload of drunk Americans who were here legally "studying Cuban rhythm."

But tens of thousands of U.S. citizens snuck into Havana illegally every year, passing through Cancún or Nassau. (In some years, I tallied four of those visits.) During his first term, Obama zeroed out the funding to pursue such scofflaws, and since December a cascade of travel reforms has seen JetBlue's first flight to Havana—a nonstop from JFK for authorized travelers—and a new plan for ferry service from Key West. Florida-based Carnival Cruise Line, the largest operator on the planet, has won approval from U.S. authorities to begin biweekly landings in Cuba next May, using the *Adonia,* a 710-passenger ship themed around "social impact" voyages. At press time, in early August, Congress was

Opposite: The island has been transformed in the past two years, with hundreds of new businesses and more freedom for tourists to travel wherever they like.

OPPOSITE PAGE, CLOCKWISE FROM TOP LEFT: DUSTIN SAMMANN (3); SEBASTIANO TOMADA/REPORTAGE BY GETTY; THOMAS DWARZAK/MAGNUM; DUSTIN SAMMANN; KARI MEDIG; SEBASTIANO TOMADA/REPORTAGE BY GETTY; MICHAEL CHRISTOPHER BROWN/MAGNUM

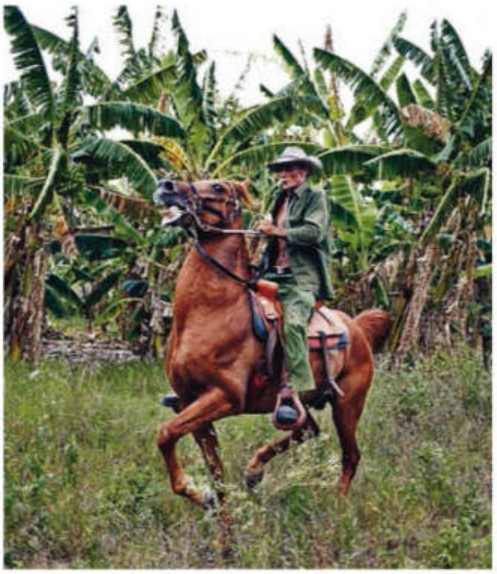


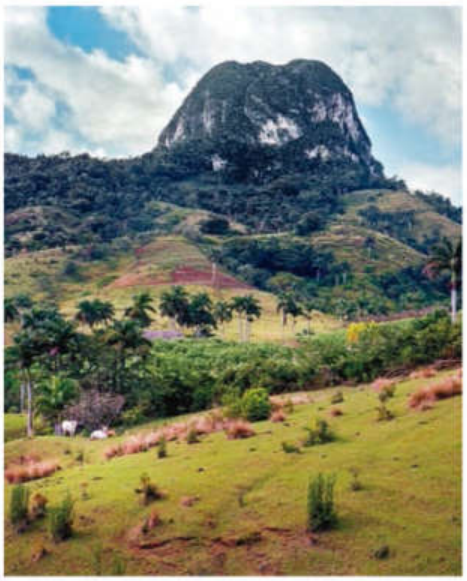



HABANA















Old Havana

debating lifting the trade embargo entirely. When that happens, up to a million Americans are expected to join the existing crowds.

The abrupt onset of reforms inside Cuba means that for the first time, individual, self-organized travel is becoming less onerous and expensive. A new generation of Americans will soon be able to explore Cuba at their own pace, doing things that should be perfectly routine but aren't, like renting cars, climbing crags, or setting their own itineraries—all difficult or banned under Fidel Castro. Obama's diplomatic opening gets much of the credit, but Raúl Castro has been making changes ever since he took the reins from his ailing brother nearly a decade ago. Only now, after years of glacial Cuban bureaucracy, have his simple economic reforms—legal self-employment, cheaper Internet access, increased rights to travel abroad, the licensing of hundreds of thousands of private businesses—begun to take effect.

As recently as 2013, I noticed little change in the day-to-day life of Cubans, but this February I was stunned to come back after two years and find the island transformed. I saw this even in small towns like Cárdenas and Sancti Spíritus, but it is most obvious in Havana, where everything seemed to have a new coat of paint, including the old cars. For decades those old Chevys and Buicks were among the few private cars in Cuba, but they are increasingly shoved aside by fleets of Korean Kias and Chinese Geelys that are easier to import for the small new business class. Some 360,000 such enterprises, from repair shops to media companies, have been licensed since 2011, and out of 11 million Cubans, a million were released from mandatory and practically unpaid state employment to earn their own living. The result has been a surge in economic growth and optimism unseen in half a century.

The tourism business was the obvious winner, and Havana in particular is booming, the hotels full and the ancient alleys thronged with foreigners. Airbnb launched last April with 1,000 members—and doubled that number in 40 days. TripAdvisor now reviews 522 restaurants in Havana alone. (About one of my favorites, the hipster bar 304 O'Reilly: "Everything was very good, which is an especially rare thing in Cuba.") The home cafés called *paladares,* little places with just 12 chairs, have been superseded by large private restaurants with scores of employees and ingredients sourced from the first wave of private farms in the countryside. You already have to elbow your way through a crowd to get a mojito where Errol Flynn used to drink. But the changes go much deeper: the population is better fed, better dressed, and (crucially) sure that, with Havana and Washington both changing, their future has finally arrived.

I NEVER FELL in love with Cuba, not quite. My first visit, in 1991, was mercenary, a writer's attempt to find a story no one else was seeing. The Cuban Revolution may have started with a giant party, but long before I arrived it became a dead hand on Cuban life, the easygoing, tropical version of a Warsaw Pact summer vacation. That first trip, I slept in a spartan "national" hotel in Havana that cost just $7 a night and came with a radio and an air conditioner labeled in Cyrillic. In 1993, in Cienfuegos, a once elegant sugar port on the south coast, food was so scarce that I waited in line for an hour and was questioned by two plainclothes cops before I was allowed to eat a small dish of paella. Flavored with iron and diesel, it was unforgettably the worst meal of my life—and yet a privilege in



"Faithful to our history"

a country that was starving. Back in Havana, I watched two dogs fight to the death for a tiny pile of garbage.

Those were the hunger years, but for two decades I came back, inspired and awed by the ability of Cubans to not just survive but adapt and even thrive. I chronicled the island's weaknesses—that would be the commie dictatorship, the repression of human and political rights, the petty controls over every aspect of life. But I also found and described strengths. I wrote about the stunning oceans and untouched coastlines, benignly neglected for decades by a revolution that could provide no gasoline and whose fishing boats disappeared routinely to Key West. I once lived for a month in Havana on the average Cuban salary, which amounted to dimes a day—an exercise in hunger but also solidarity. Cubans gave me a lesson in survival and an answer to why the best people live in the worst places.

Two books emerged from my obsession—one on Che Guevara, another on Fidel. Cuba's edge was darker than other places, if less sharp. The benefits of free education and health care, as well as a ruthless police state, drowned out all opposition, and Havana in the nineties was a city of whispering and petty corruption, squalid deals and transparent jockeying for plates of chicken. Everyone lied every day. If you could swim in this queer pool, it was an unforgettable experience.

EVEN STOMACH BUGS DON'T PLAGUE THE MODERN TRAVELER AS MUCH AS THE NAGGING SUSPICION THAT *THIS* ISN'T REALLY *IT*. **THE *IT* WAS ALWAYS SOME TIME AGO,** IN SOME OTHER PLACE. WE DON'T WANT TO BE THOSE PEOPLE, THE ONES WHO ARRIVED TOO LATE.

But was it authentic? No. Foreigners want a Cuba that doesn't change, but Cubans want exactly that: change. "They want their iPhones," says Alfredo Estrada, the Cuban-American author of *Havana: Autobiography of a City*. "They've been living in a very unnatural state of isolation, and they want to join the global community," to get "very modern very quickly."

We want them to keep driving those cute old cars. We're nostalgic for a Cuba that shouldn't exist—constrained by our embargo and crippled by dictatorship. Estrada calls the desire to visit an unchanged Cuba patronizing, as if the island is a museum, not a nation entitled to a future.

That future, he says, should include the careful preservation of all that does make Cuba distinct. Some of the first towns built in the Americas are here, including Santiago de Cuba, now the island's second-largest city, a charming Caribbean destination despite losing much of its early architecture in fires and earthquakes. Havana, once the New York City of Latin America, **continued on page 102**

Photographs by SEBASTIANO TOMADA

trim toward the



There's no quick fix for post-traumatic stress disorder, but research has shown that surfing's hit the water with his close friend Brian, a former Navy SEAL whose service in Afghanistan himself or others—seemed inevitable.



Photograph by
LEROY
GRANNIS

light

physicality and flow can give victims some relief and a way forward. MATT SKENAZY beat up his body, tortured his mind, and pushed him into a zone where violence—against

Four men in camouflage fatigues stop our car. "ID," one says. ¶ I pull out my wallet and hand him my license. ¶ "What're you doing on base?" the soldier asks. ¶ "We're going surfing," I tell him, nodding at the boards stacked in the back of the car. He glances at my friend, in the passenger seat, who I'll call Brian. Like me, he looks a bit wild after an eight-hour drive from Santa Cruz down the California coast to Camp Pendleton. "Pull off to the side over there," the soldier says. I do, and another soldier walks over and asks for my ID again. "That guy's got it," I say. ¶ "And yours?" he asks Brian.

"I don't have one, but here're my papers," Brian says, handing over a sheet that says he was honorably discharged from the Navy SEALs in October 2012.

"Oh shit," the soldier says when he realizes Brian was a SEAL. "OK, that's fine. Go right ahead." I pull back onto the street and hook a left toward the ocean.

Brian and I grew up together. Best friends. At 19, he went off to war and came back fucked-up. Post-traumatic stress, traumatic brain injuries, nerve damage. In May 2014, he cracked. "I'm in pain," he wrote on Facebook, "and now will bring the pain to someone else. Some incompetent motherfuckers are going to die."

I called him immediately. He said that Veterans Administration doctors had recently doubled the dose of his medication without following up to see how he was doing. He was not doing well.

"We can get you the care you need," I said.

"Yeah. If I burn that place to the ground and shoot someone in the kneecap."

I wasn't the only one who saw his post. Friends across the country started calling and texting him and each other. Someone told me that his dad had called the sheriff in the family's hometown, Santa Cruz. Brian quickly got off the phone with me but soon texted: "I'm a little whacked-out … But these weird drugs are in my system …" This wasn't news. The last time we'd talked, he told me he couldn't read because he kept imagining his house was being mortared.

I had heard about a program at Camp Pendleton, a Marine base on the coast between Orange County and San Diego, that used surfing to treat PTSD in enlisted men. Some of the volunteers were veterans who had learned to surf when they were young and now had service-related problems. A few months later, we drove down to check it out.

I FIRST MET BRIAN on the side of the road in 2001. We were both 15. He was pushing an old bike that had a flat tire, and a surfboard was tucked under his arm. I'd just started driving and was headed to the beach with a mutual friend, Matt, so I picked him up.

Brian was just under six feet tall and weighed about 170 back then. Like Matt, he had wide, square shoulders from more than a decade of competitive swimming. Brian's face—jaw, nose, cheekbones—was all right angles. Years of chlorine, sun, and salt had turned his already blond hair a glowing white. I was a skinny kid with dark, curly hair who had just learned to surf. Brian looked and acted the way I thought all surfers should. I felt cooler just hanging out with him.

Brian's father was an English teacher at the local community college. One of his brothers was at Columbia University, and the other would soon leave Harvard to work for an investment-banking firm. Brian had a prodigious vocabulary, spoke in a stream of references to Modigliani, Plato, and Tolstoy, and was on track to follow his brothers to the Ivy League. A lot of kids didn't know what to make of him. But Matt, Brian, and I became inseparable, piling into my car and driving up and down the coast looking for waves. At night we'd steal beers from my dad and chuck the empties in a bush on the side of the house.

When we were 17, Brian's mother committed suicide. In the aftermath, he put school on hold and started looking for a different path. "Subconsciously, I wanted to do something to protect people," he says now. "Part of it, though, was I just needed to get the fuck out of Dodge."

We were all pretty aimless. I went to college at the University of California at Santa Cruz, then dropped out to travel through New Zealand. Matt moved to Brooklyn to start a band. Brian thought about joining the Peace Corps, but instead, in 2005, he joined the Navy, hoping to become a SEAL. "I had something to prove," he says. In the days before we both left town, I'd see him leading a few dozen other guys—like him, bound for basic training—through beach runs and marathon sessions of push-ups and sit-ups.

After completing basic at the Great Lakes naval base in Illinois, Brian went to Coronado, on the coast near San Diego, for the six days of Hell Week, the rigorous stretch of sleep deprivation and fitness challenges designed to weed out weak-willed SEAL prospects. On day three, he got caught between a 700-pound boat and some rocks, which fractured both of his tibiae and his right fibula, and he was forced to fall back into the next class of recruits. There, he herniated a disk in his spine while lifting heavy logs. The disk pinched a nerve, resulting in permanent loss of feeling in three of his fingers.

Eventually, Brian excelled in that brutal environment. Once, he won a push-up contest by doing 330 in five minutes. In 2008, he graduated and became a member of SEAL Team Two.

FOR THE NEXT four years, Brian was based in Virginia Beach. Initially, he deployed only for training, but even that was dangerous. The stories he tells are fragmentary, but there's enough information to get the picture.

One night, off the coast of Panama, his team was fast-roping from a helicopter onto a boat that was getting tossed wildly by high surf. Brian came in too hot, and his head smacked the ship's deck. He sustained the first of approximately seven traumatic brain injuries.

Starting in 2010, he made several trips to Europe to train with special forces from Israel, Sweden, Germany, and France, and

PREVIOUS PAGES: *MIDGET FARRELLY SURFING SHORE BREAK, MAKAHA*, 1968. © LEROY GRANNIS. COURTESY OF M+B GALLERY, LOS ANGELES



MICHAEL TUREK/GALLERY STOCK

more injuries followed. He suffered a nearly fatal arterial-gas embolism while diving. At a firing range, a 7.62-millimeter rifle round skipped off the ground and nicked his ear, shattering his sunglasses. Brian was trained to be an explosives expert, or breacher, so he was in charge of opening and clearing locked doors. He carried a 12-gauge shotgun and C4. Usually, he was the closest man to the blast. In Poland, after a night out, Brian and a group of SEALs were jumped in front of a bar. He limped home with a deep stab wound in his thigh. "You should see the other guy," he wrote on Facebook.

In 2012, he went to Afghanistan on a combat deployment, a period he rarely talks about. All I know is that he worked in a tactical operations command in Kandahar. At one point, the Taliban attacked an Afghan Local Police graduation ceremony with grenades and machine guns. A dozen charred bodies were loaded onto a helicopter and transported to an operating room on base. Brian spent the afternoon huddled over them, running communications between the surgeon and his superiors.

Over the phone once, Brian told me in a hollow voice that he'd killed a woman. "She was shooting at us," he said. "I didn't have a choice." SEAL buddies seemed to die constantly. He went to nine funerals one summer.

"I'm in pain," Brian wrote on Facebook, "and now will bring the pain to someone else. Some incompetent motherf--kers are going to die."

Brian got back from Afghanistan in the spring of 2012. He needed surgery on his spine. Chronic pain in his neck, knees, and hips, along with the head injuries, had started to take their toll. He was depressed and contemplated suicide. "Special Forces are abused," he says. "They always have been." In the fall of 2012, he left the military.

Over the following weeks, he interviewed with seven private security firms, but he didn't find a job he could stick with. He usually couldn't sleep, and when he could he'd dream about getting stabbed, drowning, or being in a firefight with no cover. When awake he was overcome by nausea, cold sweats, and a constant feeling that "everything is fucked"—telltale signs of PTSD. The VA had given him meloxicam, for pain, and the antipsychotic quetiapine fumarate. He took them but refused to admit to himself that anything was seriously wrong.

By that winter, thoughts of a job had evaporated, and he was road-tripping alone in his Toyota Tacoma. He'd grown a beard, put on weight, and become "kind of feral." Traveling back east, he climbed Mount Rogers in Virginia, kayaked the Gauley River, and fished small Appalachian tributaries, catching and eating what he could. He cut through Nashville and headed northwest, making his way along I-70 toward the Rockies. Driving was hard; he'd developed hypervigilance, always scanning roadsides for improvised explosive devices or other threats.

One night in Missouri, he made camp in a saddle between two hills, still about 14 hours away from Denver, when, as he put it, the dust began to settle. Brian couldn't shake the image of the charred bodies in the helo. But it was the smell of burned human flesh he remembered most, "like roast pork." He'd stopped taking his meds and was feverish with withdrawal. Self-medicating with a bottle of bourbon didn't help. Lying in his military-issue tent with a Springfield .45-caliber pistol clutched to his chest, he hallucinated that wolves were attacking him. As the sun began to rise, he finally drifted off. When he woke up, he was soaked through from melting snow. He thought to himself, You know, Brian, maybe you're not really that squared away after all.

PTSD IS ONE of the most widespread health problem faced by United States veterans; treating it costs the VA upwards of $3 billion a year. There are two common approaches: prolonged-exposure therapy (PE), which involves repeatedly and vividly revisiting the traumatic experience, and cognitive-processing therapy (CPT), which focuses on how a patient responds to events in his or her postwar life. PE and CPT have the best

pedigree of any recognized therapy available, but neither technique works for everyone. In his book *The Evil Hours: A Biography of Post Traumatic Stress Disorder,* ex-Marine David Morris writes of his experience with PE: "I began to think of the treatment not as therapy so much as punishment."

Soldiers who also experience chronic pain, like Brian, are typically prescribed a cocktail of powerful narcotics, including oxycodone and Vicodin. The opioids blunt a patient's suffering for a while, but they interfere with physical and mental functions, and over time can lead to addiction or overdose.

Outside of the conventional methods, just about everything you can imagine has been used to alleviate PTSD. After World War I, doctors tried milk diets, electroshock therapy, and plain old shouting. More recently, art therapy, yoga, mountain climbing, hypnosis, and cross-country skiing have been tried, with varying degrees of success.

In 2003, Carly Rogers, a Los Angeles County lifeguard and graduate student at the University of Southern California, began developing a program called Ocean Therapy, in which soldiers learn to surf, bracketed by structured group discussions on the sand. In 2007, she tested the program with a dozen soldiers at Camp Pendleton. After just a few waves, they were laughing in the lineup. "Oh, my God, our Marines are talking," said the lieutenant who had approved the experiment. "They don't talk. Ever."

Since then more than 1,000 Marines have been treated with Ocean Therapy, and hundreds of veterans and surfers have worked as volunteers in the program, including 11-time world champion Kelly Slater. In a paper published last year in the *American Journal of Occupational Therapy,* Rogers wrote that most participants in the study reported significantly decreased PTSD symptoms after being in the program for just five weeks. Attendance at such things is usually spotty, but with surfing it was roughly 75 percent.

Nick Caddick, a psychologist at Loughborough University in the UK, spent 18 months studying the effects of surfing on British soldiers. One of Caddick's subjects had been hatching concrete plans to hang himself from a tree in his yard, but every time he went surfing he put it off for at least another week. "Regular surfing," Caddick wrote in a paper published last year, "was necessary for disrupting the cycle of PTSD symptoms that would otherwise remain a continuous or uninterrupted source of suffering."

The reasons for this are not well understood. Rogers developed Ocean Therapy with psychologist Mihaly Csikszentmihalyi's flow theory in mind. The physical exertion and intense focus required to surf often produces flow states, which flood the brain with neurochemicals like anandamide and serotonin, the same substances found in antidepressants. In addition, it's believed that when people are submerged in water, their bodies alter the balance of epinephrine and dopamine to the levels achieved during meditation.

"The emotional aspect of the weightlessness I feel is analogous to curling up in the fetal position," Brian says. Ben, his eldest brother, notices it, too. "Surfing is one of the major ways he and I connect now. Anytime we're able to get in the water, everything seems to fall into place. We get into a rhythm together."

Rogers has seen similar results. "In combat you wait and you wait, and then you engage in a firefight," she says, quoting a participant. "In surfing, you wait and you wait, and then you get a beautiful adrenaline rush."

LAST FALL I ASKED Brian if he wanted to volunteer at surf therapy with me. His mental state was alarming, and the VA wasn't helping, so I figured anything was worth a shot. A few weeks later, I picked him up in Santa Cruz at the house he shares with his retired father and their pit bull, Eli. Brian was wearing jeans, flip-flops, and the brown T-shirt they give you when you become a SEAL. Eli ran around the house as he packed a beige field jacket, khaki shorts, a camo hat, insulated camo pants, and a black Patagonia jacket, slammed a shot of tequila, and walked across the street to put two surfboards and two wetsuits in the car. "Shit," he said, patting his pockets. "Where's my wallet?"

PTSD has been linked to changes in the neurocircuitry and neurotransmitters that balance the retrieval of memories. "People have profound changes in how they think of themselves in the world," says Paula Schnurr, acting executive director of the VA's National Center for PTSD and a psychologist at the Geisel School of Medicine at Dartmouth College. Brian has a hard time remembering what he was like before the military.

"Have you ever seen a dog that's been abused?" says Ben. "It will all of a sudden get very aggressive, start shaking, snap at someone for no reason. Brian is like that. I don't know what happened to him in Afghanistan, but whatever it was jacked him up something serious. He's so tightly wound, it's scary."

Brian still suffers from insomnia and depression. Crowds put him on edge. Often he'll send me something random, like a Rilke poem ("How we squander our hours of pain / How we gaze beyond them into bitter duration to see if they have an end") or a photo of a graphic painting like Goya's *Saturn Devouring His Son*.

"He's trying to sort out how to be in the world around him, given that he has a new understanding of how violent and destructive we can be as a species," Ben says. "I can't say for certain, but I think he's trying to come to grips with a pretty grim version of the world that he has encountered up close and personal."

The pain in Brian's spine rarely stops—for some reason, it's at its worst in the morning and at sundown. A good, pain-free stretch lasts up to three hours. Every day he has to wake up and decide whether he can even leave the house. He can't work a steady job, and interacting with friends can be daunting.

My parents live in Santa Cruz, and over the course of a year, whenever I visited, Brian and I would make a 7:30 A.M. surf date. At least a dozen times, I waited on the couch for an hour before calling to ask why he hadn't come by to pick me up. "I'm just not feeling good," he'd say. I wouldn't take it personally, but it made me miss the kid from high school who would wake up everyone in the house at six, pounding on the front door.

"I think he's trying to come to grips with a pretty grim version of the world that he has encountered up close and personal," says Brian's brother Ben.

"HOW'S IT GOING?" I ask Brian as we pull away from the curb and head south to Camp Pendleton. Two weeks before, he stopped using his computer. He'd ditched his cell phone a couple of months before that, so the only way to get in touch was to hope he picked up the landline at his house.

Discussing his problems is difficult. Some days he'll be very open, saying that it's cathartic to talk. But at other times he's so psychologically drained, in so much pain, or just so sick of all the questions that he'll

ignore my calls for weeks.

He's seeing a new therapist, he tells me as we drive, a family friend. It's helping, but he still doesn't feel like himself. In addition, he's paying out of pocket from his Navy savings to see a chiropractor three times a week and trying to meditate daily.

As we weave through weekend traffic on Highway 1, I bring up the VA. "It wasn't just that they weren't giving me everything that I wanted," Brian says. "It was that they weren't giving me *anything* I wanted. They were recommending the medication-only approach and absolutely deterring every other option. Going to the VA made me a lot worse."

The VA's track record isn't good. In 2014, veterans across the country were forced to wait months before getting an appointment with a mental-health professional. Meanwhile, officials falsified wait-time data, and several veterans died while bureaucrats twiddled their thumbs. The fiasco was especially infuriating because studies have shown that the strongest predictor of trauma morphing into full-blown PTSD is a lack of positive social support, something that many vets, Brian included, weren't getting from the government.

"I have been unsuccessful in my attempts to enlist the weekly assistance of a medical doctor that specializes in PTSD," he wrote on Facebook when these trends were in the news. "A person with my diagnosis, uncared for by mental health professionals, does not have a high rate of survival.... What are my options? I don't want to die."

Before the sun sets, we pull off at a wide beach fronted by clapboard condos and sand berms. We quickly shimmy into our wetsuits and paddle out through waist-high surf to sit on our boards, silently looking out to sea, waiting for a set.

A shimmering green line rises up from the horizon. The wave isn't big, but there's a nice corner on the right and a long, walled-up left. We start paddling into position to split the peak when four bottlenose dolphins pop up in the wave's face. The edges of their dorsal fins are missing large chunks, and their sides are raked with white scars. The wounds could be from sharks or fishing nets, but they're probably from fighting other dolphins over mates, territory, or a thousand other reasons we'll never understand. We sit and watch as they share the wave, ride it nearly to the shore, and somersault back for another.



MICHAEL TUREK/GALLERY STOCK

THE BEACH AT Camp Pendleton looks like it's been groomed. There are no rocks or seaweed, and until half a dozen volunteers arrive, there aren't any footprints. Wooden Adirondacks sit on the sand in pairs, beneath umbrellas. The surf is small, about a foot or two, and a warm Santa Ana wind blows out to sea, kicking spray off the back of the waves like sparks from a fire.

Erin O'Donnell, an occupational therapist from El Segundo, California, is filling in for Carly Rogers, who's home on maternity leave. As everyone trickles in, O'Donnell tells me that each session is structured around a theme, like trust or transitions.

"The ocean has a lot to teach us," she says. "Today we're working on acceptance."

It sounds like AA talk, but she has a point. When dealing with the ocean, there are so many things out of your control. Big-wave surfers often say that when you're held under by a massive wall of water, the last thing you want to do is struggle; fighting wastes valuable energy that's best conserved for survival.

Soon all 20 of us sit in a circle on the sand. At O'Donnell's request, everyone shares what they're working on. The Marines call this their "kumbaya circle."

A man named Gabe, from Ohio, has his wetsuit on backward. "I'm accepting new things," he says. Gabe has never surfed. He grew up playing football but was hit by a rocket-propelled grenade and can't run anymore. Brian has trouble remembering names and calls him Buckeye.

"I can't swim," says Mike, a Marine from Texas who's shaped like an action figure, his chest and shoulders covered in tribal tattoos. "So I'm accepting that there are lifeguards here and y'all will look out for me."

Brian talks about his physical limitations. He used to surf longer than anyone I know, for hours on end. These days surfing is an escape from his injuries—the water makes him feel weightless—but too much of it leaves his spine aching for days. "It's been more about learning how to live with the condition I'm in," he says, "and less about trying to recover the condition I used to be in."

After everyone speaks, large soft-top surfboards are handed out to the enlisted men. I talk to Daniel, from Colorado, who was hit by two improvised explosive devices, in 2004 and 2009. "The first one got me pretty good," he says, laughing a little. All the men here have physical injuries, but there are no prosthetic legs or wheelchairs. Their most serious wounds are internal.

"I count this as one of my appointments," Daniel says. "There's something about the water. Sitting out there." He owns a dog-training business and plans to expand it now that he's out of the military. "I'm never going back home," he says. "I'm gonna run my own business and surf all day." **continued on page 104**

Made for Walking

FALL'S BEST BOOTS PLAY AS WELL AT THE OFFICE AS THEY DO ON THE TRAIL. JUST REMEMBER TO KICK OFF THE MUD.



Johnny Chukka by **Bogs**; $155; bogsfootwear.com
Allen by **Børn**; $155; bornshoes.com
Britton Hill Waterproof Moc Toe by **Timberland**; $190; timberland.com
Tumalo Mid by **Keen**; $130; keenfootwear.com

Photograph by NIGEL COX

AFRICA

We cannot be the generation that stands by and idly allows incredible species such as elephant, lion, and rhino to disappear on our watch.



OutsideGO

OUTSIDEGO.COM

Tusk

www.tusk.org

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Power Play

A STATELY MACHINE THAT'S FIT FOR A KING—OR A CONNIVING PRESIDENT

by Jon Gugala

THE FIRST thing I did after assembling the WaterRower Classic was not use it. I let it sit there in proud homage to Francis "Frank" Underwood, Kevin Spacey's character in *House of Cards*, who receives the machine from his wife with all the excitement of a filibuster. But then, just as Underwood's power-grab schemes start to gain momentum, he ditches the button-down for an undershirt and starts rowing. And so did I. The 3.5 gallons of water in the reservoir deliver a satisfying *whoosh* with every pull—perfect for getting your head right before a long day of back-room maneuvering, or, in my case, cataloging gear. The monitor displays time, distance, power, and stroke count. And what POTUS could fail to approve of the Classic's American provenance and sleek look? The oil-sealed black walnut, sustainably harvested in the Appalachian Mountains, gleams as the water circles inside the tank. It's just the ticket for an ambitious politician—or editorial assistant—plotting his next move. $1,495; waterrower.com

Photograph by INGA HENDRICKSON



THERE'S NO APP FOR THIS.







9 resort cities. **One** adventurous oasis.

GREATER palm springs
find your oasis.

palm springs | desert hot springs | cathedral city | rancho mirage
palm desert | indian wells | la quinta | indio | coachella



BEST FOR: Stormy Bike Commuting
Swrve Milwaukee ES $150
Despite its clean urban aesthetic, there's more to this soft shell than meets the eye. It's loaded with bike-friendly features like a drop tail, reflective hits, pit zips, four-way stretch, a huge zippered stash pocket, and double cuffs to keep drafts out of the sleeves. A light fleece lining and TPU middle layer tolerate wild autumn weather, making for a happier ride and an easier transition to the office. swrve.us

BEST FOR:
Alpine Starts
Montane Fireball Verso $149
On chilly dawn outings, hit the trail with the reversible Fireball's weather-resistant Pertex layer on the outside to seal in warmth. Then, as the day heats up, switch to the breathable Hypervent fabric. montane.co.uk

BEST FOR: Bluebird Days at the Crag
Black Diamond Deployment Hybrid $249
This winter midlayer has enough synthetic insulation to excel on its own in milder conditions. Stretchy nylon and a breathable merino blend allow you to move freely without working up a sweat. blackdiamondequipment.com

BEST FOR: Summit Bids
Brooks-Range Armor $500
Armor indeed. DWR-treated Polartec Neo-Shell fabric easily shrugs off torrential downpours, sleet, and snow. At 1.1 pounds, it's heavier than many stripped-down jackets, but you get features like two front pockets and six zippered vents—one on each biceps, two on the back, and two on the chest. brooks-range.com

BEST FOR:
Casual Outings
Ibex Wool Aire Matrix $250
The Matrix isn't quite as warm as down or synthetic-fill jackets, but it's sleeker, and the panels of breathable merino mix regulate your temperature rather than just raise it. It's the perfect piece for fall dog walking or just sitting on a drafty barstool. ibex.com

Photographs by NIGEL COX



BEST FOR: Staying Dry with a Conscience
Fjällräven Keb Eco-Shell $500
Made with recycled-polyester face and liner fabrics, and treated with fluorocarbon-free waterproofing, the Keb Eco-Shell may be the greenest hard shell on the market. Of course, you're more likely to appreciate how well it repels the elements. fjallraven.com

BEST FOR: Going Far, Forecast Be Damned
Ultimate Direction Ultra $179
Designed with input from ultrarunner Anton Krupicka, the waterproof-breathable Ultra is intended to get you through the most challenging conditions. It weighs less than six ounces and has smart features like flip-on mitts and vented pits and hood. ultimatedirection.com

All-Weather Systems

TAKE ON VARIABLE FALL CONDITIONS WITH THESE VERSATILE JACKETS

by Peter Koch

BEST FOR: High-Intensity Mountain Sports
Arc'teryx Norvan $325
The minimalist Norvan is lightweight (7.5 ounces), has just one internal pocket, and features elastic instead of bulky cinch systems on the cuffs, hem, and hood. But what you'll notice first is the soft-on-the-skin liner, part of a new three-layer version of Gore-Tex called C-Knit. arcteryx.com

Some Like It Rough

GRAVEL GRINDERS THAT TAKE YOU FAR BEYOND THE PAVEMENT. PLUS: NECESSITIES FOR A LONG DAY IN THE SADDLE.

by Aaron Gulley

1. Diamondback Haanjo Trail $1,850
BEST FOR: Going anywhere.
THE TEST: The Haanjo isn't the softest ride, but we like the durability of aluminum on rocky roads, and the carbon fork helped mute chatter. Testers called it tubby for fast road rides, but they raved about how confident it felt on dirt. "It has mountain-bike DNA," said one. Diamondback keeps the cost down with an FSA crankset but provides plenty of value for the money by including Ultegra levers and drivetrain, wide-rimmed Hed Flanders wheels, and grippy 40-millimeter Kenda tires.
THE VERDICT: A lot of bike at a reasonable price. 20.9 lbs; diamondback.com

2. Jamis Renegade Elite $4,299
BEST FOR: Racers who dabble in adventure—and vice versa.
THE TEST: The closest bike on this page to a standard roadie, the carbon-fiber Renegade is as fleet as a cobbled-classics race machine. Jamis flattened out the seatstays and dropped them well below the seat collar to allow the bike's rear end to flex with the road. It's a supple ride, though Jamis wisely kept the bottom bracket big and stiff, so the Renegade felt equally at home in a peloton as on washboard logging trails. And the Shimano BR-785 hydraulic brakes are our favorite road model for their sleek ergonomics and over-the-bar power.
THE VERDICT: A road rider's one-bike quiver, especially if you have a spare set of lightweight race wheels. 18.8 lbs; jamisbikes.com

3. Moots Routt $7,499 ($3,325 frame only)
BEST FOR: Smoothing out rough roads.
THE TEST: Titanium is arguably the ultimate rough-road frame material—silky as steel, tough as alloy, and almost as light as carbon. The Routt is the exemplar. The compact, sloped-top-tube design made the bike maneuverable on rutted surfaces, and the long wheelbase felt stable even on singletrack. Steering was crisp, and we appreciated the threaded bottom bracket, which is more reliable than press-fit versions. Many testers felt that the upright position wasn't agile in tight terrain, though few complained due to the premium build, including an Enve fork. But while we love Shimano Ultegra parts, at this price we expected a little bit more.
THE VERDICT: Timeless aesthetic + modern engineering = a mixed-terrain bike for the ages. 18 lbs; moots.com



Photographs by INGA HENDRICKSON



1. Reynolds ATR wheels $1,550
With tubeless-ready carbon hoops and house-made road hubs, these wheels are like motocross for your gravel bike. The rim's 21-millimeter internal width fits the widest rubber your bike will allow, and it spreads the footprint of any tire you put on it for extra traction. reynoldscycling.com

2. Teravail Cannonball tires $85
Launched by the parent company of Salsa Cycles, Teravail was founded to meet the tire needs of niche segments like gravel racers. The Cannonball, a fast-rolling 38-millimeter tire with pronounced side knobs for grip, withstood the notoriously sharp flint at this year's Dirty Kanza 200 without a scratch. teravail.com

3. Lazer Z1 $270
The Z1 has 31 gaping vents, breathes better than André Greipel in a sprint, and kept us cool on even the muggiest afternoons. And an optional snap-on plastic shell ($20), which can be rolled up and stuffed in a pocket, cuts drag and keeps out those afternoon showers. lazersport.com

4. Salsa Cowchipper handlebars $75
These bars strike an excellent balance, with a shallower drop for comfort when you're tucked and a 24-degree flare for a broad array of hand positions and tons of control on chancy descents. salsacycles.com

5. Oakley Jawbreaker sunglasses $220
The Jawbreakers might look a little ridiculous, but they kept our eyeballs moist and clear even on 12-hour days pedaling dusty roads. And the shape ensured that sweat never sullied the lenses. The lens-change swivel is the most polished system we've seen, although the Prizm lenses were so clear we rarely found ourselves reaching for a different tint. oakley.com

6. Shimano SH-M163 shoes $150
Shimano makes these shoes for enduro riders, but the easy-walking rubberized outsole and big swaths of mesh ventilation work great for gravel events. The glass-fiber sole is stiff but not too stiff, and alternating strap closures allow you to microtune fit for superior comfort. bike.shimano.com

7. 7mesh ReGen jacket $350
Cut from Gore-Tex Active, which allows maximum moisture transfer, so you don't feel like you're bound in Saran wrap when you're going hard, this minimalist shell kept us dry in all-day downpours. It rolls up smaller than a newspaper when you don't need it, and the pass-through rear pockets provide jersey access without a gymnastics maneuver. 7meshinc.com

8. Magellan Cyclo 505 GPS $430
The sleek little touchscreen Cyclo comes with a full set of street maps and can up- and download tracks via Wi-Fi—handy, should you find yourself off course. The 12-hour battery life is long enough for most events. Best of all, it costs a lot less than the competition. magellangps.com

Hold Your Edge

THE BEST KNIVES AND MULTITOOLS, FROM THE KITCHEN TO THE BACKCOUNTRY

by Nick Kelley



BEST FOR: Fine Chopping **Orchard Steel 5" Petit Chef** $350 This small chef's knife was forged in Burlington, Vermont, by Moriah Cowles and has a thick maple handle and carbon-steel blade that stays sharp through a year of daily use. It's our go-to for slicing fruits and veggies. orchardsteel.com

BEST FOR: Keeping It Simple **James Chapter** $275 This small and elegant folding knife slips easily into your pocket, making it perfect for everyday carrying. And with a stainless-steel blade just under three inches, a titanium frame lock, and few moving parts, it requires almost zero maintenance. thejamesbrand.com

BEST FOR: Fast Action **Kershaw Launch 1** $150 This automatic blade opens with a surprising burst of power and speed. The 3.4-inch knife has a unique black oxide finish and is easy to sharpen, while the anodized-aluminum handle balances well in your hand. Made entirely in Oregon. kershaw kaiusaltd.com

BEST FOR: Everything **Leatherman Signal** $120 Leatherman keeps coming up with new ways to fit handy tools into a unit the size of a Snickers bar. The Signal has a 2.7-inch blade and a set of wire cutters tucked beneath the pliers, plus a detachable diamond-coated sharpener. Nice: the carabiner doubles as a bottle opener. leatherman.com

BEST FOR: Survival **TOPS Black Rhino** $200 With a sturdy 5.5-inch blade and a handle of rugged Micarta, the burly Black Rhino is a force in the field. A pry bar built into the end of the handle can get you out of sticky situations. Like all of TOPS's fixed blades, it was hand-made in Idaho. topsknives.com

Photograph by HANNAH McCAUGHEY


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ROUTE SETTERS **continued from page 78**

of the final, then he spidered up to the middle of the wall with little effort. Clinging to a triangle, he stuck his foot out and leaped for the final bubble. His big hands caught it, but he slid off backward with such momentum that he tumbled from the mat and landed at the feet of two judges. The crowd gasped.

Danielson was smirking like a demented leprechaun. "You liked that?" I asked him. "I liked that," he said. We watched as Ondra crashed two more times and, finally, slammed his fist on the mat in frustration.

The last problem of the day, Zolotukhin's, was up next. Canadian Jason Holowach rubbed his chalky hands together and mimed his moves. He dug into the first pocket with his left hand and then grabbed the next pocket with his right before stalling out. Off to his right was a wok-shaped volume with a crimp on its far surface, but he couldn't figure out how to grasp it and dropped to the mat. On his second attempt, Holowach switched his sequence, grabbing the lower pocket with his right hand and the upper pocket with his left. Now his right hand was free to grab the crimp on the wok.

I was next to Zolotukhin, who was hunched over with a deadpan expression on his face. His plans seemed like a bust. "His sequence gets to the bonus," he said, "but it doesn't get you to the top." As if following a script, Holowach fell off the wall and failed to complete the problem as the clock wound down.

Next up was Nathaniel Coleman, a clean-cut 18-year-old from Utah, who had been dominating all day. He seemed to be reading Zolotukhin's beta, taking the low pocket with his left hand and the high pocket with his right. After a moment, he was hanging from his right hand alone and his body naturally pivoted clockwise, away from the wall. He was now facing the crowd, hanging under the lip of the wall.

That's when it happened. The teenager handcuffed his right wrist and pulled himself up until his biceps bulged and his arm was bent at a 90-degree angle. Then he lunged for the crimp and pinched it securely with his left hand. The crowd roared, and Zolotukhin slapped a palm on the stage.

Coleman kept ascending to the final hold, mugged for the camera, and pumped his fist. Next to us, a cameraman pulled his gaze away from the viewfinder and looked over at the proud route setter. "Is that what you meant to happen?" he asked.

The setter nodded. "Yeah," he said coolly.

"Fuck," the cameraman said. *O*

BRENDAN BORRELL (@BBORRELL) WROTE ABOUT FRENCH ADVENTURER FRANÇOIS GUENOT IN JUNE.

CUBA **continued from page 85**

avoided wholesale redevelopment after 1959 in "a fortunate accident," says Estrada. "So let's prolong the accident, because that's what's going to draw people to Havana. Keep the beauty and it will bring a lot of prosperity to the people of Havana."

Foreigners still can't buy real estate, but someday hotel companies and investors will snatch up the properties now moldering in historic parts of Cuba, and choice Old Havana houses may be worth millions in ten years. The Cuban government has mostly protected ordinary residents from displacement, but that will probably change. "A lot of those people are going to get screwed," Estrada says with a sigh, before adding, "Hopefully not."

But Havana, along with Cuba as a whole, is deservedly ripe for improvements. Much of Old Havana has been without running water for decades. The famous Malecón seafront promenade is in desperate condition, even abandoned in parts. "You are going to have all the usual tourist crap," Estrada acknowledged, "but with that will come economic development, growth, restaurants, vendors. And it's not just the physical hotels—it's the industry, the people, the systems."

"Go," Estrada tells people. "Go as soon as possible. Who knows what will happen in five or ten years, what kind of transition will occur? Go now."

Simple advice. We should go to Havana, not before it changes but so that it does change. So that it can change. The most authentic Cuba is the one still to come.

MY OWN CUBAN fantasy isn't the *daiquiri mulata,* made with crème de cacao, or an old Nash Rambler rumbling slowly through the rugged streets. There was always a time before we got there, but the past is easy in Cuba. What I want is the next chapter.

Once, a few years ago, I set off across Old Havana with Estrada's history of the city in hand, reading as I walked, crossing from the founding stones at the Plaza de Armas to the *extramural,* literally the outside-the-walls development of the modern metropolis. This old colonial city, the largest remaining in the hemisphere, was belted with defensive walls in the late 17th century, some of which are still visible among the bars of Montseratte Street. Havana continued growing outward, an encyclopedia of architecture, often on the same block, with turn-of-the-century Baroque and Catalan Art Nouveau, Mudéjar movie palaces from the early 20th century, and an ambitious blast of 1950s Modernism, like the insanely atmospheric Riviera Hotel, a casino built by gangster Meyer Lansky far from the prying eyes of the FBI. This built history is the single most unshakable thing about Cuba, but the revolution added almost no gestures of its own to the city—the empty Plaza of the Revolution, the never-finished National Art School, and a few monuments to Che. The power elite preferred a modest setting like El Aljibe, a restaurant thatched like a peasant hut that still serves the best black beans and orange-marinated chicken in Cuba.

The pickled authenticity of Old Havana and a few magnets like Trinidad, a Unesco World Heritage town to the southeast, will change quickly under the assault of decentralized tourism. But most of Cuba needs change. Continue just a mile or two from the gentrified zone along Obispo Street and you'll find plenty of untouched, neglected authenticity, like El Cerro, where wrecked 19th-century mansions decorated with laundry spill down a long road, people living as if they have no holes in their roofs. Tourism has had little effect on such places. You can drink a thimble of sweet coffee from a street vendor and see no other foreigners, no matter how long you wait. Sometimes raw El Cerro feels more authentic than polished Old Havana.

Still, it can be hard to tell the real from the fake. Santería, the Afro-Cuban religion, is packaged nightly for tourists in Nikon-friendly events. A Cuban devotee assured me that this was faux Santería, not the true thing. Yet the chaotic, sweat-soaked home ceremonies I'd attended over the years were much the same: crowded initiation rites and birth celebrations that weren't complete without rum, demonic possessions, and gifts of cash. What about the Riviera, for that matter? It was confiscated by the Castro government in 1959, but Lansky would be proud: it's still a notorious hotel full of prostitutes, just like he always wanted.

Every walk around Havana unspools 500 complex years. In 15 minutes you pass from the stones laid by conquistadores to *la esquina caliente,* the "hot corner," where men argue baseball all day. A few blocks and half a millennium later you're in El Floridita, where they serve the Hemingway daiquiri, a double made with grapefruit juice and (gasp!) no sugar at all.

Hemingway spent decades on the island, and called himself a *sato,* a run-of-the-mill Cuban. But I don't know what he was thinking. Why would you want Cuba without the sweet stuff? *O*

CONTRIBUTING EDITOR PATRICK SYMMES (@PATRICKSYMMES) IS THE AUTHOR OF CHASING CHE, THE BOYS FROM DOLORES, *AND THE FORTHCOMING* THE DAY FIDEL DIED.

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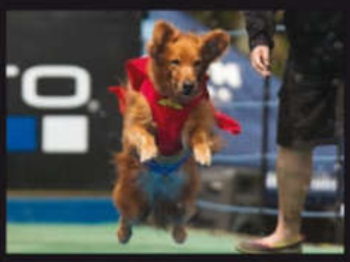
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SURF THERAPY **continued from page 91**

Each soldier is partnered with two volunteers—Brian works with Buckeye—and for a while the beach becomes a playground. Two dozen grown men laughing and pushing each other into little waves, wiping out and laughing some more. When someone stands and rides all the way to the sand, the group explodes with hoots and whistles. After every wave Buckeye rides, he paddles back out and bellows, "Let's get a bigger one!" Armored personnel carriers run maneuvers up the beach, and Black Hawk helicopters fly overhead. Nobody seems to notice.

"THE MORE TIME I spend with these guys, the better for me," Brian says in the parking lot later. An unintended consequence of Ocean Therapy is that it can be useful for both participants and volunteers. "There's no quitting them," says Sean, a former special-ops soldier with PTSD. "What helps me is helping others who have it." Vets spend years as part of a team, eating, living, and training together. Then they're cut loose into the world, alone. Surfing seems to help largely because it gives soldiers and vets a group of guys to hang out with.

"It's really cathartic to people in my situation," Brian says. In a way they're circling the wagons, creating a support structure that's otherwise absent from their lives. Daniel regularly surfs with a few men he met through the program. "They talk me into going out," he says. "When I don't want to go, they get me to anyway."

We leave Camp Pendleton and drive north, kicking around plans for a trip to Indonesia. Or maybe Nicaragua. In the meantime, Brian has filed two disability claims with the VA, one for his PTSD and one for the brain injuries. And he's trying to find his way back to school. He plans to attend the community college where his father once taught.

After eight hours, I pull into Brian's driveway late at night, just as the car's fuel indicator blinks on. He pulls his boards from the back and throws a pair of soaking wetsuits on the porch.

"You wanna surf tomorrow?" I ask. "Yeah," he says. "I'll pick you up at 7:30." I drive home wondering if he'll show up, or if I'm going to be setting my alarm just to wake up and sit on the couch for an hour.

The next morning, at half past seven, Brian's truck rolls to a stop in front of my parents' house. A light rain is falling as he bangs on the front door. I've got the coffee on. We each get a cup and sip it slowly while we load the boards. *O*

MATT SKENAZY IS AN OUTSIDE *ASSOCIATE EDITOR.*

RESCUE **continued from page 71**

me, was to find his wife. Once reunited they would make their way to Finland, which has a large Somali community, crossing the European Union's generally porous borders. "I've heard that they have jobs there," Mahmoud said.

In fact, while Scandinavian countries have strong economies and have generally been more receptive than other nations to migrants seeking political asylum, a backlash is growing: in 2012, a parliamentary aide suggested on her blog that migrants wear armbands, and last May, a Helsinki city councillor called for the "forced sterilization" of African males.

We arrived in Pozzalo late in the afternoon. Mahmoud peered uneasily over the gangplank at the handful of Italian policemen milling around the port. Then, resigned to the uncertainty that awaited him, sure at any rate that the worst was behind him, he walked down the plank and was ushered to a medical screening tent. "We're grateful to all of you!" Mahmoud shouted as he left the boat.

What happened to the migrants next would depend largely on their resourcefulness, Gabriele Casini, a communications officer for Doctors Without Borders, told me as we stood on deck, watching. The Italian government is obliged by EU rules to keep them in the country until their applications for asylum are approved or rejected. "But they are not strict," Casini said. "They don't always take fingerprints, so the migrants hope to slip through and reach Germany or the Scandinavian countries." The two of us watched Mahmoud board a bus to a reception camp and gave him a final wave. "In these centers they are free," Casini told me. "They can take off."

Perhaps Mahmoud would get to Finland after all.

AS THIS LATEST group of refugees confronted their new lives in Europe, Europe continued to dither over how to deal with them. In June, EU leaders hashed out a modest scheme to share 60,000 Syrian and Eritrean asylum seekers over the next two years, though the United Kingdom refused to go along. Italy has warned that without a fair deal, it would start issuing temporary visas for migrants to travel beyond its borders. Meanwhile, as word of the dangers of the Mediterranean crossing spreads, migrants from Asia, Africa, and the Middle East are increasingly gravitating to an alternate route, traveling overland to Western Europe through Turkey, Greece, and the Balkans.

"How pathetic is it that one motivated family can change something and all these entities don't?" Catrambone asked me one afternoon back in Sliema, Malta. The voyage was over, and he'd picked me up at my hotel in his black Range Rover. As *Buena Vista Social Club* blared on the stereo, Catrambone navigated through the sun-splashed streets of this densely populated Maltese tourist town on our way to lunch at the Malta Royal Golf Club, a British-built oasis that dates back to the 1880s. It was a strange choice for a man who lately has dedicated himself to the refugees of the world. But Catrambone doesn't make any secret of his love of the finer things in life. "I'm a member, I think, but I just haven't had time to play golf," he said as he dug into his jeans pocket and fumbled for his ID card at the entrance gate.

Over cappuccinos on a terrace, we talked about the future of his rescue operation. With donations flowing to MOAS, the Catrambones are ready to step back and pass on the operation to the crew. "We kickstarted it, and now with these guys on their own, the model is complete," he told me. "We're saying, Take it over."

For the moment, Catrambone has returned to running Tangiers International—he recently purchased Malta's biggest aviation insurance broker, making Tangiers the insurer of Air Malta and several other airlines. Business remains in his blood, it's clear, but he isn't ruling out another humanitarian project.

"There is a level of civic-mindedness among millennials," said Catrambone, one of the oldest members of that post-Gen-X generation. "They want free rice and open borders for everybody. They are thinking about solutions that benefit society as a whole, not themselves."

He stood up and stretched his long frame. "When you reach this point in your life, you realize what you're good at," he said, displaying his customary mix of charming guilelessness and brash self-confidence. "I realized that I was good at doing the impossible." *O*

CONTRIBUTING EDITOR JOSHUA HAMMER'S BOOK THE BAD-ASS LIBRARIANS OF TIMBUKTU AND THEIR RACE TO SAVE THE WORLD'S MOST PRECIOUS MANUSCRIPTS *WILL BE PUBLISHED BY SIMON AND SCHUSTER IN APRIL 2016.*

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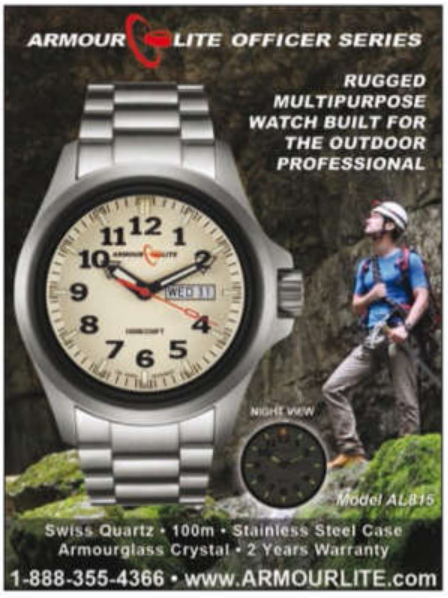
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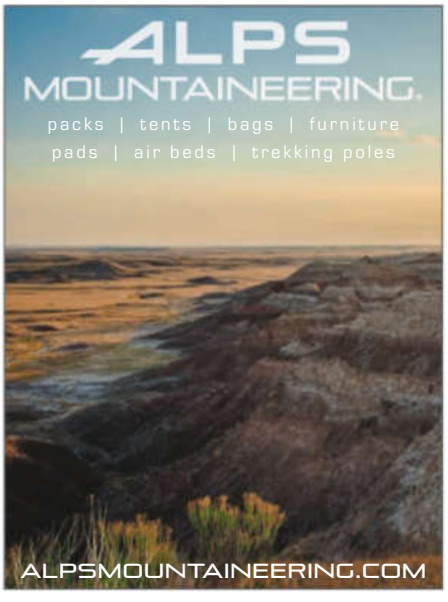

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2016 GLC 300 shown in Iridium Silver metallic paint with optional equipment. Vehicle available fall 2015. *MSRP excludes all options, taxes, title, registration, transportation charge and dealer prep. Options, model availability and actual dealer price may vary. See dealer for details. ©2015 Mercedes-Benz USA, LLC
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